STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Marcos De la Cruz)
MEETING DATE: June 13, 2018

ITEM: **5C**

SUBJECT: **General Waste Discharge Requirements for Discharge or Reclamation of Extracted Brackish Groundwater, Reverse Osmosis Concentrate Resulting from Treated Brackish Groundwater, and Extracted Groundwater from Structural Dewatering Requiring Treatment to Surface Waters (Groundwater General Permit) in the San Francisco Bay Region** – Reissuance of General NPDES Permit

CHRONOLOGY: February 2012 – General Permit issued.

DISCUSSION: This Revised Tentative Order (Appendix A) would reissue a general permit that regulates aquifer reclamation program well discharges, discharges of reverse osmosis concentrate, and structural dewatering discharges requiring treatment for pollutants other than fuels and volatile organic compounds. Such discharges originate as groundwater and pose relatively little water quality threat, so they require minimal or no treatment.

The Revised Tentative Order includes updated effluent limitations and monitoring requirements to control pollutant discharges. Specifically, it contains new water quality-based effluent limits (WQBELs) for certain pollutants because recently-collected monitoring data indicate that some current discharges contain pollutants at concentrations of concern. Adding the new WQBELs allows these discharges to remain under this permit.

We received comments (Appendix B) from Santa Clara University on the tentative order circulated for public review. The University expressed concern that its relatively small structural dewatering discharge to the Guadalupe River contains naturally-occurring low-pH and selenium above the proposed WQBELs. In our response (Appendix C), we suggested options to raise the pH and revised the tentative order to authorize a selenium mixing zone and dilution credit, and thus less stringent selenium WQBELs for the University's discharge. However, we also reserved some assimilative capacity for selenium in that reach of the Guadalupe River. We anticipate that the Revised Tentative Order will remain uncontested.

RECOMMEN-
DATION: Adoption of the Revised Tentative Order

FILE: CW-778700

APPENDICES: A. Revised Tentative Order
B. Comments
C. Response to Comments

Appendix A
Revised Tentative Order

REVISED TENTATIVE ORDER No. R2-2018-XXXX
NPDES PERMIT No. CAG912004

GENERAL WASTE DISCHARGE REQUIREMENTS FOR Discharge or Reclamation of Extracted Brackish Groundwater, Reverse Osmosis Concentrate Resulting from Treated Brackish Groundwater, and Extracted Groundwater from Structural Dewatering Requiring Treatment to Surface Waters (Groundwater General Permit)

Table 1. Administrative Information

This Order was adopted by the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board), on:	XXXX
This Order shall become effective on:	January 1, 2019
This Order shall expire on:	December 31, 2023
CIWQS Place Number	778700
CIWQS Regulatory Measure Number	412630
The U.S. Environmental Protection Agency (U.S. EPA) and the Regional Water Board have classified discharges under this general National Pollutant Discharge Elimination System (NPDES) permit (General Permit) as minor discharges based on their impact to receiving waters.	
To obtain coverage under this General Permit, prospective Dischargers must submit a Notice of Intent (NOI) form as shown in Attachment B and a filing fee equivalent to the first year's annual fee. If the NOI form is complete, the Executive Officer may issue an Authorization to Discharge. Dischargers enrolled under Order No. R2-2012-0060 that submitted an NOI at the end of that order's term need not submit a new NOI form to enroll under this Order.	
Authorized Dischargers who wish to continue discharging after this Order's expiration date shall file a new NOI form no later than April 5, 2023. Such discharges may become subject to a reissued order upon Executive Officer authorization.	

I, Bruce H. Wolfe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on the date indicated above.

Bruce H. Wolfe, Executive Officer

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Tables

Attachments

I. SCOPE OF GENERAL PERMIT

These Waste Discharge Requirements (WDRs) shall serve as an NPDES General Permit for discharges from groundwater facilities to surface waters, such as creeks, streams, rivers (including flood control canals), lakes, or the San Francisco Bay.

A. This General Permit covers the following three categories of discharges:

1. Aquifer reclamation program well discharges;
2. Reverse osmosis (RO) concentrate from aquifer reclamation program well discharges to estuarine or marine receiving waters; and,
3. Structural dewatering discharges of 10,000 gallons per day or greater requiring treatment for pollutants other than fuels and volatile organic compounds.

B. This General Permit does not cover:

1. Discharges to sanitary sewer systems;
2. Sewage;
3. Stormwater;
4. Discharges covered under an individual NPDES permit or WDRs;
5. Discharges associated with construction dewatering activities; or
6. Discharges requiring treatment for contamination by fuels or volatile organic compounds (such dischargers must seek coverage under a separate general permit, NDPES No. CAG912002).

The Fact Sheet (Attachment F) provides additional information describing covered discharges.

To obtain coverage under this Order, a Discharger must complete a Notice of Intent (NOI) form (Attachment B) that, among other things, describes the treatment system installed at its facility.

II. FINDINGS

The Regional Water Board finds:

A. Legal Authorities. This Order serves as WDRs pursuant to California Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by U.S. EPA and Water Code chapter 5.5, division 7 (commencing with § 13370).

B. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information obtained through monitoring and reporting programs and other available information. The Fact Sheet contains background information and rationale for the requirements in this Order and is hereby incorporated into and constitutes findings for this Order. Attachments A through G are also incorporated into this Order.

C. Provisions and Requirements Implementing State Law. Some discharge prohibitions and provisions and monitoring and reporting requirements of this Order implement State law only. They

are not required under the federal CWA; consequently, violations of these provisions are subject to the enforcement remedies available under the Porter-Cologne Water Quality Control Act.

D. **Notification of Interested Parties.** The Regional Water Board notified prospective enrollees and interested agencies and persons of its intent to prescribe these WDRs and provided an opportunity to submit written comments and recommendations. The Fact Sheet provides details regarding the notification.

E. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. The Fact Sheet provides details regarding the public hearing.

THEREFORE, IT IS HEREBY ORDERED that Order No. R2-2012-0060 (previous order) is rescinded upon the effective date of this Order, except for enforcement purposes, and in order to meet the provisions of Water Code division 7 (commencing with § 13000) and regulations adopted thereunder and the provisions of the CWA and regulations and guidelines adopted thereunder, Dischargers authorized to discharge pursuant to this Order shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for past violations of the previous order.

III. DISCHARGE PROHIBITIONS

A. Discharge of waste at a location or in a manner different than that described in an NOI and Authorization to Discharge is prohibited.

B. Discharge of groundwater contaminated with volatile organic compounds (VOC) or fuels is prohibited (dischargers with VOC or fuels contamination must obtain coverage under the VOC Fuel General Permit, NPDES No. CAG912002).

C. Discharge of silt, sand, clay, or other earthen materials in quantities sufficient to cause deleterious bottom deposits, turbidity, or discoloration in surface waters, or to unreasonably affect or threaten to affect beneficial uses is prohibited.

D. Discharge of filter backwash water, membrane cleaning solutions, or other waste streams associated with RO treatment, other than RO concentrate, is prohibited.

E. Discharge of well drilling fluids is prohibited.

F. Discharge of floating debris, oil, grease, scum, or other floating materials is prohibited.

G. Discharge of pollutants so as to create pollution, contamination, or nuisance as defined by Water Code section 13050 is prohibited.

H. Discharge to a storm drain causing scouring or erosion at the point where the storm drain discharges into the receiving water, or causing or contributing to scouring of banks, excessive sedimentation, or flooding of the storm drain system or receiving water downstream of the point of discharge, is prohibited.

I. Bypass or overflow of untreated or partially-treated groundwater to waters of the State or United States from a treatment system, or any collection or transport system or pump station tributary to the treatment system, is prohibited (see Attachment D section I.G).

J. Water reclamation consisting of recharge or reinjection is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations for Category 1 and 2 Discharges

1. Aquifer reclamation program well discharges (Category 1) and RO concentrate from aquifer reclamation program well discharges (Category 2), as defined in an NOI and Authorization to Discharge, shall comply with the following effluent limits, with compliance measured at Monitoring Location EFF-00n as described in the Monitoring and Reporting Program (MRP) (Attachment E):

Table 2. Effluent Limitations for Category 1 and 2 Discharges

Pollutant	Discharge to Receiving Waters Used as Drinking Water[1]		Discharge to Other Receiving Waters	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
pH	Between 6.5 and 8.5 at all times			
Turbidity[2]	5.0 NTU	10 NTU	--	--
Chloride[2]	250 mg/L	500 mg/L	--	--
Total Dissolved Solids[2]	500 mg/L	1,010 mg/L	--	--
Total Residual Chlorine	0.0 mg/L at all times[3]			

Abbreviations:

NTU = nephelometric turbidity units
mg/L = milligrams per liter

Footnotes:

[1] "Receiving Waters Used as Drinking Water" are surface waters with existing or potential beneficial uses of "Municipal and Domestic Supply" or "Groundwater Recharge," or both. Groundwater recharge uses may include recharge areas to maintain salt balance or to halt saltwater intrusion into freshwater aquifers.

[2] Applicable to Category 2 discharges only.

[3] As explained in MRP section IX.B.5, a non-detect result using a detection level equal to or less than 0.1 mg/L will not be considered out of compliance.

2. Category 1 and Category 2 discharges shall comply with the following acute toxicity limitations, with compliance measured at Monitoring Location EFF-00n as described in the MRP:

   a. A 3-sample median value of not less than 90 percent survival.

   b. A single sample value of not less than 70 percent survival.

   These acute toxicity limitations are defined as follows:

   - **3-sample median.** A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit if one or more of the past two bioassay tests also show less than 90 percent survival.
   - **Single sample.** A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit.

B. Effluent Limitations for Category 3 Discharges

1. Structural dewatering discharges (Category 3), as defined in an NOI and Authorization to Discharge, shall comply with the following effluent limits, with compliance measured at Monitoring Location EFF-00n as described in the MRP:

Table 3. Effluent Limitations for Category 3 Discharges

Pollutant	Discharge to Receiving Waters Used as Drinking Water[1]		Discharge to Other Receiving Waters	
	Monthly Average (µg/L)	Daily Maximum (µg/L)	Monthly Average (µg/L)	Daily Maximum (µg/L)
pH	Between 6.5 and 8.5 at all times.			
Copper, Total Recoverable[2]				
Lower or South SF Bay Discharge[3]	10.	20.	10.	20.
Central SF Bay Discharge[3]	5.4	11	5.4	11
Suisun or San Pablo Bay Discharge[3]	7.1	14	7.1	14
Freshwater Discharge	7.0	14	7.0	14
Nickel, Total Recoverable[2]				
Lower or South SF Bay Discharge[3]	22	44	22	44
Central SF Bay Discharge[3]	10.	21	10.	21
Suisun or San Pablo Bay Discharge[3]	25	50.	25	50.
Freshwater Discharge	43	86	43	86
Selenium, Total Recoverable[4]	4.1	8.2	4.1	8.2
Selenium, Total Recoverable[5]	21	27	21	27
Chlorine, Total Residual	0.0 mg/L at all times[6]			

Abbreviations:

µg/L = micrograms per liter
mg/L = milligrams per liter

Footnotes:

[1] "Receiving Waters Used as Drinking Water" are surface waters with existing or potential beneficial uses of "Municipal and Domestic Supply" or "Groundwater Recharge," or both. Groundwater recharge uses may include recharge areas to maintain salt balance or to halt saltwater intrusion into freshwater aquifers.

[2] The applicable limit depends on the sub-embayment into which the discharge eventually flows. Freshwater limits apply when the receiving water salinity is no greater than one part per thousand at least 95 percent of the time.

[3] These limits also apply to discharges to tidally influenced reaches of waters draining to San Francisco, San Pablo, and Suisun Bays.

[4] These limits do not apply to Santa Clara University's discharge from 2505 The Alameda, Santa Clara.

[5] These limits apply only to Santa Clara University's discharge from 2505 The Alameda, Santa Clara.

[6] As explained in MRP section IX.B.5, a non-detect result using a detection level equal or less than 0.1 mg/L will not be considered out of compliance.

2. Discharges shall comply with the following acute toxicity limitations, with compliance measured at Monitoring Location EFF-00n as described in the MRP:

   a. A 3-sample median value of not less than 90 percent survival.

   b. A single sample value of not less than 70 percent survival.

These acute toxicity limitations are defined as follows:

- **3-sample median.** A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit if one or more of the past two bioassay tests also show less than 90 percent survival.
- **Single sample.** A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit.

V. RECEIVING WATER LIMITATIONS

A. Discharge shall not cause the following conditions to exist in receiving waters:

1. Floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses;

2. Alteration of suspended sediment in such a manner as to cause nuisance, or to adversely affect beneficial uses, or to cause detrimental increase in the concentrations of toxic pollutants in sediments or aquatic life;

3. Suspended material in concentrations that cause nuisance or adversely affect beneficial uses;

4. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

5. Alteration of temperature beyond present natural background levels;

6. Changes in turbidity that cause nuisance or adversely affect beneficial uses or increases from normal background light penetration or turbidity greater than 10 percent in areas where natural turbidity is greater than 50 nephelometric turbidity units;

7. Coloration that causes nuisance or adversely affects beneficial uses;

8. Visible, floating, suspended, or deposited oil or other products of petroleum origin; or

9. Toxic or other deleterious substances in concentrations or quantities that cause deleterious effects on wildlife, waterfowl, or other aquatic biota or render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

B. Discharge shall not cause the following limits to be exceeded in receiving waters within one foot of the water surface:

1. **Dissolved Oxygen**

   a. For San Francisco Bay and tidal waters, the following limitations shall apply:

   Downstream of Carquinez Bridge: 5.0 mg/L, minimum
   Upstream of Carquinez Bridge: 7.0 mg/L, minimum

b. For non-tidal waters, the following limitations shall apply:

Cold habitat waters: 7.0 mg/L, minimum
Warm habitat waters: 5.0 mg/L, minimum

The median dissolved oxygen concentration for any three consecutive calendar months shall not be less than 80 percent of the dissolved oxygen content at saturation. When natural factors cause concentrations less than those specified above, discharges shall not cause further reduction in ambient dissolved oxygen concentrations.

2. **Dissolved Sulfide.** Dissolved sulfide shall not exceed natural background levels (0.1 mg/L maximum).

3. **pH.** The pH shall not be depressed below 6.5 nor raised above 8.5, nor cause to vary from normal ambient pH by more than 0.5 pH units.

4. **Nutrients.** Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

5. **Un-ionized Ammonia.** The annual median for un-ionized ammonia shall not exceed 0.025 mg/L in San Francisco Bay. The maximum concentrations in Central San Francisco Bay and upstream shall not exceed 0.16 mg/L. The maximum concentration in Lower San Francisco Bay and upstream shall not exceed 0.4 mg/L.

C. Discharge shall not cause a violation of any water quality standard for receiving waters adopted by the Regional Water Board or State Water Resources Control Board (State Water Board) as required by the CWA and regulations adopted thereunder.

VI. PROVISIONS

A. Standard Provisions

The Discharger shall comply with the "Standard Provisions" in Attachment D.

B. Monitoring and Reporting Provisions

The Discharger shall comply with the MRP in Attachment E and future revisions thereto. The Executive Officer may specify additional monitoring requirements in individual Authorizations to Discharge.

C. Special Provisions

1. Reopener Provisions

The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances as allowed by law:

a. If present or future investigations demonstrate that the discharges governed by this Order have or will have, or will cease to have, a reasonable potential to cause or contribute to adverse impacts on water quality or beneficial uses of the receiving waters.

b. If new or revised water quality standards or total maximum daily loads (TMDLs) come into effect for San Francisco Bay or contiguous waters (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order may be modified as necessary to reflect the updated water quality standards or TMDL wasteload allocations. Adoption of the effluent limitations in this Order is not intended to restrict in any way future modifications based on legally-adopted water quality standards or TMDLs or as otherwise permitted under federal regulations governing NPDES permit modifications.

c. If translator, dilution, or other water quality studies provide a basis for determining that a permit condition should be modified.

d. If State Water Board-precedential decisions, new policies, new laws, or new regulations are adopted.

e. If an administrative or judicial decision on a separate NPDES permit or WDRs addresses requirements similar to those applicable to these discharges.

f. A Discharger may request a permit modification based on any of the circumstances above. With any such request, the Discharger shall include antidegredation and anti-backsliding analyses.

g. Or as otherwise authorized by law.

2. Application for General Permit Coverage and Authorization to Discharge

a. Notice of Intent (NOI). A prospective Discharger seeking Authorization to Discharge pursuant to this Order shall complete and submit the NOI form in Attachment B, including results for all parameters listed in NOI form section IX.A. A prospective Discharger seeking coverage for similar discharges from multiple groundwater treatment facilities may complete one NOI that describes all proposed discharges. A prospective Discharger shall submit a separate fee for each non-contiguous site. A Discharger enrolled under the previous order that also submitted an NOI at the end of the previous order term need not submit a new NOI form to continue its authorization to discharge. The Executive Officer may modify the NOI form in Attachment B or require additional information prior to authorizing any discharge.

b. Facility Modifications. At least 30 days prior to any significant facility modification (e.g., change in treatment design capacity, treatment system design, or outfall location), the Discharger proposing the modification shall submit a modified NOI form (e.g., a markup of the original NOI form showing all changes and including a new signature and date). The Discharger shall include a transmittal letter describing the changes, their purpose, when they are to go into effect, and any new or differnt measures taken or planned to prevent potential non-compliance with this Order's requirements.

c. Authorization to Discharge. Upon receipt of a complete NOI application for a proposed discharge, the Executive Officer will review the application to determine whether the proposed Discharger is eligible to discharge under this Order. If the Executive Officer concludes that a proposed Discharger is eligible for coverage under this Order, the Executive Officer will issue an Authorization to Discharge. Upon the effective date of the Authorization to Discharge, the Discharger shall comply with the requirements of this

Order and its attachments. Any non-compliance with this Order's requirements shall constitute a violation of the CWA and Water Code and may be grounds for enforcement; termination, revocation and reissuance, or modification of the Authorization to Discharge; issuance of an individual permit; or denial of an application for reissuance.

d. **Application to Extend Coverage.** A Discharger that intends to continue discharging after the expiration date stated on the first page of this Order shall file a new NOI form by the date stated on the first page of this Order.

e. **Discharge Termination.** A Discharger may terminate its coverage under this Order by submitting a complete and signed Notice of Termination form (Attachment C) and stating the reason for termination. The Executive Officer may also terminate or revoke coverage under this Order for any of the causes specified for an individual permit as set forth in 40 C.F.R. section 122.28(b)(3). After providing notice and opportunity for a hearing, coverage under this Order may be terminated or modified for cause, including, but not limited to, the following:

   i. Violation of any term or condition of this Order;

   ii. Misrepresentation or failure to disclose all relevant facts in obtaining coverage under this Order; or

   iii. Change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

f. **Need for Individual NPDES Permit.** The Executive Officer may require any Discharger authorized to discharge pursuant to this Order to subsequently apply for and obtain an individual NPDES permit in the following circumstances:

   i. The Discharger is not in compliance with the requirements of this Order;

   ii. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants from the facility;

   iii. Effluent limitation guidelines are promulgated for the discharges covered by this Order;

   iv. A new or revised water quality control plan containing requirements applicable to the discharge is approved;

   v. The requirements of 40 C.F.R. section 122.28(a) (the circumstances under which the Regional Water Board may issue a general permit) are not met; or

   vi. Any other condition specified in 40 C.F.R. section 122.28(b)(3) is met.

3. **Water Reclamation Specifications**

These requirements apply to water reclamation activities only.

a. **Reclamation Activities.** Reclaimed water quality shall be consistent with the effluent limitations applicable to the discharge as if the discharge were to receiving waters used as

drinking water (see Tables 2 and 3). Land application shall not occur on saturated soils or be allowed to escape from the application area as surface flow unless otherwise authorized. Water reclamation activities shall be described in the Discharger's NOI, including the method of any additional treatment and location and type of water reclamation.

b. Public Health. Adequate measures shall be taken to minimize public contact with reclaimed groundwater and to prevent the breeding of flies, mosquitos, and other vectors of public health significance during or after the reclamation process.

c. Public Awareness. Public warnings shall be posted to advise the public that the reclaimed water is not suitable for drinking. Signs shall be posted in the area, and all reclamation water valves and outlets shall be visibly labeled.

d. Cross-connections. There shall be no cross-connection between the potable water supply and piping containing treated groundwater intended for reclamation.

4. Construction, Operation, and Maintenance Specifications

a. Wastewater Facilities Review and Evaluation, and Status Reports

i. The Discharger shall retain a professional engineer licensed to practice in the State of California to oversee the design, reliability, operation and maintenance, and monitoring of the treatment system to ensure compliance with this Order.

ii. The Discharger shall operate and maintain wastewater treatment facilities in a manner to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary to provide adequate and reliable treatment and disposal of all wastewater.

iii. The Discharger shall regularly review and evaluate its wastewater facilities and operational practices in accordance with the paragraph above and, so as to adapt to the potential impacts of climate change, consistent with then-current projections of sea level rise and storm surge. The Discharger shall conduct these reviews and evaluations as an ongoing component of the administration of its wastewater facilities.

iv. The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its wastewater facilities and operational practices, including any recommended or planned actions and a time schedule for these actions.

v. The Discharger shall provide a status report in each annual self-monitoring report. The status report shall describe the review and evaluation procedures, results of the review and evaluation, and any capital improvement projects.

b. Operations and Maintenance Manual Review and Status Reports

i. The Discharger shall maintain Operation and Maintenance Manuals for its wastewater facilities in usable condition and make them available for reference and use by all relevant personnel and Regional Water Board staff.

ii. The Discharger shall regularly review, and revise or update as necessary, its Operation and Maintenance Manuals so they remain useful and relevant to current equipment, operational practices, instrument calibration procedures and schedules, and sampling and analysis procedures. The Discharger shall review its Operation and Maintenance Manuals at least annually. The Discharger shall revise its Operation and Maintenance Manuals within 90 days of any significant change in treatment facility equipment, operational practices, or sampling and analysis procedures.

iii. The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its Operation and Maintenance Manuals, including any recommended or planned actions and a time schedule for these actions.

iv. The Discharger shall describe its review and evaluation procedures, and applicable changes to its Operation and Maintenance Manuals, in each annual self-monitoring report.

5. No Preemption

This Order does not preempt or supersede the authority of municipalities, flood control agencies, or other agencies to prohibit, restrict, or control discharges to storm drain systems or other watercourses subject to their jurisdiction.

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)
Also called the average, the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Bioaccumulative
Taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic
Known to cause cancer in living organisms.

Coefficient of Variation (CV)
Measure of data variability calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge
Either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit) for a constituent with limitations expressed in units of mass; or (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration). The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day. For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period is considered the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
Sample result less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dilution Credit
Amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined by conducting a mixing zone study or modeling the discharge and receiving water.

Enclosed Bay
Indentation along the coast that encloses an area of oceanic water within a distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost

harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration
Concentration that results from the confirmed detection of the substance below the ML value by the analytical method.

Estuaries
Waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars are considered estuaries. Estuarine waters are considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters include, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters
All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
Highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation
Lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL)
Highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median
Middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between n/2 and n/2+1).

Method Detection Limit (MDL)
Minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 C.F.R. part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)
Concentration at which the entire analytical system gives a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone
Limited volume of receiving water allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND)
Sample results less than the laboratory's MDL.

Persistent Pollutants
Substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollution Prevention
Any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Board or Regional Water Board.

Reporting Level (RL)
The RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from SIP Appendix 4 in accordance with SIP section 2.4.2 or established in accordance with SIP section 2.4.3. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Source of Drinking Water
Any water designated as having a municipal or domestic supply (MUN) beneficial use.

Standard Deviation (σ)
Measure of variability calculated as follows:

$$\sigma = (\Sigma[(x - \mu)^2]/(n-1))^{0.5}$$

where:
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

ATTACHMENT B – NOTICE OF INTENT FORM

Each Discharger must complete and submit a Notice of Intent (NOI) to apply for an Authorization to Discharge under NPDES Permit No. CAG912004.

This Notice of Intent form is for the facility located at (provide street address):

_____

I. CERTIFICATION

This certification must be signed in accordance with Attachment D section V.B.2. The Discharger hereby agrees to comply with and be responsible for all the conditions specified in NPDES Permit No. CAG912004.

<table>
<tr><td colspan="2">I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature Date</td></tr>
<tr><td colspan="2">Printed Name</td></tr>
<tr><td colspan="2">Title</td></tr>
<tr><td>Company / Organization</td><td>Land Owner Type (Check One)
☐ Public
☐ Private
☐ Other, specify the type:</td></tr>
<tr><td colspan="2">Address</td></tr>
<tr><td>Email</td><td>Phone No.</td></tr>
</table>

II. APPLICATION FEE AND MAILING INSTRUCTIONS

Submit a check payable to "State Water Resources Control Board" for the appropriate application fee to the following address:

San Francisco Bay Regional Water Quality Control Board
Attn: NPDES Wastewater Division
1515 Clay Street, Suite 1400
Oakland, CA 94612

Submit this form (with signature and attachments) via email to R2NPDES@waterboards.ca.gov or as otherwise indicated at www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/general_permits.shtml.

III. DISCHARGE TYPE

Permit Coverage Status (select one):

☐ This is a new discharge.

☐ This discharge is currently authorized under this Order and this NOI is to modify the current Authorization to Discharge. CIWQS Place ID: _____

☐ This discharge is currently authorized under this Order and this NOI is to continue discharging after July 31, 2023 (NOI is due November 3, 2022). CIWQS Place ID: _____

Category (select one):

☐ Category 1: Aquifer reclamation program well discharges.

☐ Category 2: Reverse osmosis (RO) concentrate from aquifer reclamation program well discharges.

☐ Category 3: Structural dewatering discharges of 10,000 gallons per day or greater requiring treatment.

IV. PROJECT INFORMATION

Type of Site or Project: (e.g., structural dewatering project)
Project Tentative Completion Date (if any):

V. UTILITY INFORMATION

I have contacted the local sanitary sewer agency serving the above named address and determined that discharging to the local sanitary sewer system is not technically and economically feasible.

Please check one (if No or Not Applicable, please explain)

☐ Yes

☐ No:

☐ Not Applicable:

Contact Person's Name and Title	
Contact Person's Email	Contact Person's Phone No.

I have contacted the local agencies having jurisdiction over the use of the storm drain system or watercourse and informed them about this proposed discharge.

Please check one (if No or Not Applicable, please explain)

☐ Yes

☐ No:

☐ Not Applicable:

Contact Person's Name and Title	
Contact Person's Email	Contact Person's Phone No.

VI. FACILITY INFORMATION

A. Facility Name:			
Street Address			
City	State	Zip Code	Phone No.
Contact Person's Name and Title			
Contact Person's Email		Contact Person's Phone No.	
Duly Authorized Representative: The following individual (or any individual occupying the position listed below) may act as the facility's duly authorized representative and may sign and certify submittals in accordance with Attachment D section V.B.3. The individual is responsible for the overall operation of the facility or for facility environmental matters. **IMPORTANT**: See section XI.F.2 below for further instructions.			
Name			
Title			
Company/Organization			
Street Address			
City	State	Zip Code	Phone No.
Email			
B. Billing Information			
Name			
Street Address			
City	State	Zip Code	Phone No.
Email			
C. Design Professional Engineer's Information (see Section XI.F.4 for further instructions)			
Name	California License Number Expiration Date		
Street Address			
City	State	Zip Code	Phone No.
Email			
D. Operation and Maintenance Professional Engineer's Information (see Section XI.F.5 for further instructions)			
Name	California License Number Expiration Date		
Street Address			
City	State	Zip Code	
Email			

E. Consulting Firm's Information (see section XI.F. for further instructions)			
Contact Person	Company Name		
Street Address			
City	State	Zip Code	Phone No.
Email			

VII. DISCHARGE LOCATION INFORMATION

Receiving Water Name:

Discharge path to Receiving Water - describe the complete path of the discharge from the exit point of the treatment system to the outfall in the receiving water – list streets, land features, and distances as necessary.

Discharge Points	**Latitude**[1]	**Longitude**[1]	
Effluent Monitoring Location (EFF-001 through EFF-*n*)			
Entry Point to Storm Drain (if applicable)			
Receiving Water (directly of via storm drain system)			
Upstream Receiving Water Monitoring Location (RSW-001U through RSW-*n*U)[2]			
	Is access unrestricted? ☐Yes ☐No If No, explain:		
Downstream Receiving Water Monitoring Location (RSW-001D through RSW-*n*D)[3]			
	Is access unrestricted? ☐Yes ☐No If No, provide details:		

1. Submit latitude and longitude coordinates in decimal degrees with 5 significant figures to the right of the decimal point.
2. At a point 50 feet upstream from the point of discharge into the receiving water, or if access is limited, at the first point upstream which is accessible.
3. At a point 50 feet downstream from the point of discharge into the receiving water, or if access is limited, at the first point downstream which is accessible.

☐ Check here if information for additional outfalls is attached to this form.

VIII. TREATMENT SYSTEM INFORMATION

A. General Information

Groundwater Treatment Design Capacity (gpm) as certified by a Professional Engineer licensed to practice in California.
Discharge description (describe discharge and potential pollutants of concern). Attach additional sheets if needed:
Discharge Frequency: ☐ Continuous ☐ Daily ☐ Intermittent ☐ Emergency (explain):

Estimated Total Water Reclaimed (%): Provide reasons if reclamation is not technically and economically feasible:	Type of Reclamation (e.g., landscape irrigation):

B. Unit Information

Type	Number	Description (e.g., depth, size, capacity, dosage)
Extraction wells or sump pumps		
Extraction wells with dedicated treatment units		
Settling tanks in series		
Settling tanks in parallel		
Oil-water separators		
Filters for particulates in groundwater		
De-chlorination Unit (applies to Dischargers that chlorinated their well water)		
Granular activated carbon (GAC) vessels in series		
Granular activated carbon (GAC) vessels in parallel		
Chemical additive(s) (e.g., coagulants)		
Other tanks (e.g., equalization tank)		
Water reclamation tanks		

Energy Dissipator System		
Other BMPs (e.g., range of the RO facility blending ratio)		
Other treatment units (e.g., ion exchange, reverse osmosis)		

IX. DISCHARGE WATER QUALITY

For existing dischargers, summarize influent and effluent monitoring data collected during the past five years. Provide a separate data summary table for each monitoring location. New applicants shall summarize influent data.

A. **INFLUENT DATA** - Summarize influent monitoring data for each influent monitoring location (INF-*n)* and list them sequentially.

Influent Monitoring Location. _____ - Conventional and Non-Conventional Pollutants

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Maximum Concentration	Range	Method Detection Limit	Test Method	Number of Samples
Turbidity	NTU							
Chloride	mg/L							
Total Dissolved Solids	mg/L							
Chlorine Residual	mg/L							

Influent Monitoring Location. _____ - Priority Pollutants

CTR No.	Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Maximum Concentration	Range	Method Detection Limit	Test Method	Number of Samples
1	Antimony	µg/L							
2	Arsenic	µg/L							
3	Beryllium	µg/L							
4	Cadmium	µg/L							
5a	Chromium (III)	µg/L							
5b	Chromium (VI)	µg/L							
6	Copper	µg/L							
7	Lead	µg/L							
8	Mercury	µg/L							
9	Nickel	µg/L							
10	Selenium	µg/L							
11	Silver	µg/L							
12	Thallium	µg/L							
13	Zinc	µg/L							
14	Cyanide	µg/L							
16	2,3,7,8-TCDD (Dioxin)	µg/L							
17	Acrolein	µg/L							
18	Acrylonitrile	µg/L							
19	Benzene	µg/L							
20	Bromoform	µg/L							
21	Carbon Tetrachloride	µg/L							
22	Chlorobenzene	µg/L							
23	Chlorodibromomethane	µg/L							
24	Chloroethane	µg/L							
25	2-Chloroethylvinyl ether	µg/L							
26	Chloroform	µg/L							
27	Dichlorobromomethane	µg/L							
28	1,1-Dichloroethane	µg/L							
29	1,2-Dichloroethane	µg/L							
30	1,1-Dichloroethylene	µg/L							
31	1,2-Dichloropropane	µg/L							
32	1,3-Dichloropropylene	µg/L							
33	Ethylbenzene	µg/L							
34	Methyl Bromide	µg/L							
35	Methyl Chloride	µg/L							
36	Methylene Chloride	µg/L							

CTR No.	Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Maximum Concentration	Range	Method Detection Limit	Test Method	Number of Samples
37	1,1,2,2-Tetrachloroethane	µg/L							
38	Tetrachloroethylene	µg/L							
39	Toluene	µg/L							
40	1,2-Trans-Dichloroethylene	µg/L							
41	1,1,1-Trichloroethane	µg/L							
42	1,1,2-Trichloroethane	µg/L							
43	Trichloroethylene	µg/L							
44	Vinyl Chloride	µg/L							
45	2-Chlorophenol	µg/L							
46	2,4-Dichlorophenol	µg/L							
47	2,4-Dimethylphenol	µg/L							
48	2-Methyl- 4,6-Dinitrophenol	µg/L							
49	2,4-Dinitrophenol	µg/L							
50	2-Nitrophenol	µg/L							
51	4-Nitrophenol	µg/L							
52	3-Methyl 4-Chlorophenol	µg/L							
53	Pentachlorophenol	µg/L							
54	Phenol	µg/L							
55	2,4,6-Trichlorophenol	µg/L							
56	Acenaphthene	µg/L							
57	Acenaphthylene	µg/L							
58	Anthracene	µg/L							
59	Benzidine	µg/L							
60	Benzo(a)Anthracene	µg/L							
61	Benzo(a)Pyrene	µg/L							
62	Benzo(b)Fluoranthene	µg/L							
63	Benzo(ghi)Perylene	µg/L							
64	Benzo(k)Fluoranthene	µg/L							
65	Bis(2-Chloroethoxy)Methane	µg/L							
66	Bis(2-Chloroethyl)Ether	µg/L							
67	Bis(2-Chloroisopropyl)Ether	µg/L							
68	Bis(2-Ethylhexyl)Phthalate	µg/L							
69	4-Bromophenyl Phenyl Ether	µg/L							
70	Butylbenzyl Phthalate	µg/L							
71	2-Chloronaphthalene	µg/L							
72	4-Chlorophenyl Phenyl Ether	µg/L							
73	Chrysene	µg/L							
74	Dibenzo(a,h)Anthracene	µg/L							
75	1,2-Dichlorobenzene	µg/L							
76	1,3-Dichlorobenzene	µg/L							
77	1,4-Dichlorobenzene	µg/L							
78	3,3 Dichlorobenzidine	µg/L							
79	Diethyl Phthalate	µg/L							
80	Dimethyl Phthalate	µg/L							
81	Di-n-Butyl Phthalate	µg/L							
82	2,4-Dinitrotoluene	µg/L							
83	2,6-Dinitrotoluene	µg/L							
84	Di-n-Octyl Phthalate	µg/L							
85	1,2-Diphenylhydrazine	µg/L							
86	Fluoranthene	µg/L							
87	Fluorene	µg/L							
88	Hexachlorobenzene	µg/L							
89	Hexachlorobutadiene	µg/L							
90	Hexachlorocyclopentadiene	µg/L							
91	Hexachloroethane	µg/L							
92	Indeno(1,2,3-cd)Pyrene	µg/L							
93	Isophorone	µg/L							
94	Naphthalene	µg/L							

CTR No.	Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Maximum Concentration	Range	Method Detection Limit	Test Method	Number of Samples
95	Nitrobenzene	µg/L							
96	N-Nitrosodimethylamine	µg/L							
97	N-Nitrosodi-n-Propylamine	µg/L							
98	N-Nitrosodiphenylamine	µg/L							
99	Phenanthrene	µg/L							
100	Pyrene	µg/L							
101	1,2,4-Trichlorobenzene	µg/L							
102	Aldrin	µg/L							
103	alpha-BHC	µg/L							
104	beta-BHC	µg/L							
105	gamma-BHC	µg/L							
106	delta-BHC	µg/L							
107	Chlordane (303d listed)	µg/L							
108	4,4'-DDT (303d listed)	µg/L							
109	4,4'-DDE	µg/L							
110	4,4'-DDD	µg/L							
111	Dieldrin (303d listed)	µg/L							
112	alpha-Endosulfan	µg/L							
113	beta-Endolsulfan	µg/L							
114	Endosulfan Sulfate	µg/L							
115	Endrin	µg/L							
116	Endrin Aldehyde	µg/L							
117	Heptachlor	µg/L							
118	Heptachlor Epoxide	µg/L							
119-125	PCBs sum (303d listed)	µg/L							
126	Toxaphene	µg/L							

Influent Monitoring Location. _____ - Other Pollutants

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Maximum Concentration	Range	Method Detection Limit	Test Method	Number of Samples
TPH as gasoline	µg/L							
TPH as diesel	µg/L							
TPHs (other than gasoline and diesel)	µg/L							

B. EFFLUENT DISCHARGE DATA (for existing dischargers only) – Summarize effluent monitoring data for each effluent monitoring location (EFF-*n)* and list them sequentially.

Effluent Monitoring Location. _____ – Conventional and Non-Conventional Pollutants

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Maximum Concentration	Range	Method Detection Limit	Test Method	Number of Samples
pH	s.u.							
Turbidity	NTU							
Chloride	mg/L							
Total Dissolved Solids	mg/L							
Dissolved Oxygen	mg/L							
Chlorine Residual	mg/L							
Acute Toxicity	% survival							

Effluent Monitoring Location. _____ – Priority Pollutants

CTR No.	Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Maximum Concentration	Range	Method Detection Limit	Test Method	Number of Samples
1	Antimony	µg/L							
2	Arsenic	µg/L							
3	Beryllium	µg/L							
4	Cadmium	µg/L							
5a	Chromium (III)	µg/L							
5b	Chromium (VI)	µg/L							
6	Copper	µg/L							
7	Lead	µg/L							
8	Mercury	µg/L							
9	Nickel	µg/L							
10	Selenium	µg/L							
11	Silver	µg/L							
12	Thallium	µg/L							
13	Zinc	µg/L							
14	Cyanide	µg/L							
16	2,3,7,8-TCDD (Dioxin)	µg/L							
17	Acrolein	µg/L							
18	Acrylonitrile	µg/L							
19	Benzene	µg/L							
20	Bromoform	µg/L							
21	Carbon Tetrachloride	µg/L							
22	Chlorobenzene	µg/L							
23	Chlorodibromomethane	µg/L							
24	Chloroethane	µg/L							
25	2-Chloroethylvinyl ether	µg/L							
26	Chloroform	µg/L							
27	Dichlorobromomethane	µg/L							
28	1,1-Dichloroethane	µg/L							
29	1,2-Dichloroethane	µg/L							
30	1,1-Dichloroethylene	µg/L							
31	1,2-Dichloropropane	µg/L							
32	1,3-Dichloropropylene	µg/L							
33	Ethylbenzene	µg/L							
34	Methyl Bromide	µg/L							
35	Methyl Chloride	µg/L							
36	Methylene Chloride	µg/L							
37	1,1,2,2-Tetrachloroethane	µg/L							
38	Tetrachloroethylene	µg/L							
39	Toluene	µg/L							
40	1,2-Trans-Dichloroethylene	µg/L							
41	1,1,1-Trichloroethane	µg/L							

CTR No.	Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Maximum Concentration	Range	Method Detection Limit	Test Method	Number of Samples
42	1,1,2-Trichloroethane	µg/L							
43	Trichloroethylene	µg/L							
44	Vinyl Chloride	µg/L							
45	2-Chlorophenol	µg/L							
46	2,4-Dichlorophenol	µg/L							
47	2,4-Dimethylphenol	µg/L							
48	2-Methyl- 4,6-Dinitrophenol	µg/L							
49	2,4-Dinitrophenol	µg/L							
50	2-Nitrophenol	µg/L							
51	4-Nitrophenol	µg/L							
52	3-Methyl 4-Chlorophenol	µg/L							
53	Pentachlorophenol	µg/L							
54	Phenol	µg/L							
55	2,4,6-Trichlorophenol	µg/L							
56	Acenaphthene	µg/L							
57	Acenaphthylene	µg/L							
58	Anthracene	µg/L							
59	Benzidine	µg/L							
60	Benzo(a)Anthracene	µg/L							
61	Benzo(a)Pyrene	µg/L							
62	Benzo(b)Fluoranthene	µg/L							
63	Benzo(ghi)Perylene	µg/L							
64	Benzo(k)Fluoranthene	µg/L							
65	Bis(2-Chloroethoxy)Methane	µg/L							
66	Bis(2-Chloroethyl)Ether	µg/L							
67	Bis(2-Chloroisopropyl)Ether	µg/L							
68	Bis(2-Ethylhexyl)Phthalate	µg/L							
69	4-Bromophenyl Phenyl Ether	µg/L							
70	Butylbenzyl Phthalate	µg/L							
71	2-Chloronaphthalene	µg/L							
72	4-Chlorophenyl Phenyl Ether	µg/L							
73	Chrysene	µg/L							
74	Dibenzo(a,h)Anthracene	µg/L							
75	1,2-Dichlorobenzene	µg/L							
76	1,3-Dichlorobenzene	µg/L							
77	1,4-Dichlorobenzene	µg/L							
78	3,3 Dichlorobenzidine	µg/L							
79	Diethyl Phthalate	µg/L							
80	Dimethyl Phthalate	µg/L							
81	Di-n-Butyl Phthalate	µg/L							
82	2,4-Dinitrotoluene	µg/L							
83	2,6-Dinitrotoluene	µg/L							
84	Di-n-Octyl Phthalate	µg/L							
85	1,2-Diphenylhydrazine	µg/L							
86	Fluoranthene	µg/L							
87	Fluorene	µg/L							
88	Hexachlorobenzene	µg/L							
89	Hexachlorobutadiene	µg/L							
90	Hexachlorocyclopentadiene	µg/L							
91	Hexachloroethane	µg/L							
92	Indeno(1,2,3-cd)Pyrene	µg/L							
93	Isophorone	µg/L							
94	Naphthalene	µg/L							
95	Nitrobenzene	µg/L							
96	N-Nitrosodimethylamine	µg/L							
97	N-Nitrosodi-n-Propylamine	µg/L							
98	N-Nitrosodiphenylamine	µg/L							
99	Phenanthrene	µg/L							
100	Pyrene	µg/L							
101	1,2,4-Trichlorobenzene	µg/L							
102	Aldrin	µg/L							

CTR No.	Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Maximum Concentration	Range	Method Detection Limit	Test Method	Number of Samples
103	alpha-BHC	µg/L							
104	beta-BHC	µg/L							
105	gamma-BHC	µg/L							
106	delta-BHC	µg/L							
107	Chlordane (303d listed)	µg/L							
108	4,4'-DDT (303d listed)	µg/L							
109	4,4'-DDE	µg/L							
110	4,4'-DDD	µg/L							
111	Dieldrin (303d listed)	µg/L							
112	alpha-Endosulfan	µg/L							
113	beta-Endolsulfan	µg/L							
114	Endosulfan Sulfate	µg/L							
115	Endrin	µg/L							
116	Endrin Aldehyde	µg/L							
117	Heptachlor	µg/L							
118	Heptachlor Epoxide	µg/L							
119-125	PCBs sum (303d listed)	µg/L							
126	Toxaphene	µg/L							

Effluent Monitoring Location. _____ – Other Pollutants

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Maximum Concentration	Range	Method Detection Limit	Test Method	Number of Samples
TPH as gasoline	µg/L							
TPH as diesel	µg/L							
TPHs (other than gasoline and diesel)	µg/L							
Electrical conductivity	S/m							

X. ENGINEERING CERTIFICATION REPORT

Attach the engineering certification report signed and stamped by the Design Professional Engineer licensed to practice in California and as identified in section VI.D of the NOI. The Engineering Certification Report must include a location map, discharge flow path map, process flow diagram, unit specification sheets, and description of operation and maintenance procedures. Please see the next section for further details of the documents *required* as part of the Engineering Certification Report and NOI application package.

XI. INSTRUCTIONS FOR NOTICE OF INTENT FORM

These instructions explain how to complete the NOI. Submittal of an NOI indicates a Discharger's commitment to comply with the terms of this Order.

A. Certification

The person certifying the NOI form must meet the requirements described in Attachment D section V.B.2. *Review these requirements carefully.* Specific requirements apply to corporations, partnerships, sole proprietorships, and public agencies.

B. Application Fee and Mailing Instructions

The NOI is incomplete without the applicable permit fee. Submit the fee by sending a check payable to "State Water Resources Control Board" to the Regional Water Board address indicated on the NOI form. A separate fee is required for each non-contiguous site. At the time of permit reissuance, the application fee was **$2,062**. The State Water Resources Control Board may modify the fee at any time. For the current fee, see http://www.waterboards.ca.gov/resources/fees/water_quality.

Submit this form (with signatures and attachments) via email to R2NPDES@waterboards.ca.gov or as otherwise indicated at www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/general_permits.shtml.

C. Discharge Type

Select one of the three options to: (1) obtain coverage under this Order as a new Discharger, (2) modify the NOI as an existing Discharger, or (3) renew permit coverage. Please note that the Discharger shall file with the Executive Officer an amended NOI at least 30 days before making any material change in the character, location, or volume of the discharge. Requests to renew permit coverage shall be submitted no later than April 5, 2023.

Select one of the three categories for type of discharge. Permit requirements are dependent on the category of discharge.

D. Project Information

Provide a brief description of the project and activities to be covered by this Order, including its completion date, if any.

E. Utility Information

Provide information of the local utility agencies that were contacted for the proposed discharge. Please note that Resolution No. 88-160, adopted by the Regional Water Board on October 19, 1988, urges dischargers of extracted groundwater to reclaim their effluent and that when reclamation is not technically and/or economically feasible, to discharge to a publicly-owned treatment works.

F. Facility Information

1. **Facility name.** Provide the name of the treatment facility, street address or a description of the facility location, and information of the contact person for the facility.

2. **Duly Authorized Representative.** The person described in Attachment D section V.B.2 and signing the certification in section I of the NOI form may designate a duly authorized representative to sign permit-related submittals in accordance with Attachment D section V.B.3. Alternatively, a duly authorized representative may be designated through separate correspondence, particularly if the NOI form language does not sufficiently limit the delegated authority. For applicants, please note that if a duly authorized representative is designated, a written authorization shall be submitted to the Regional Water Board along with the NOI. If any changes occur to the authorization, a new authorization satisfying the requirements under Attachment D section V.B.3 must be submitted to the Regional Water Board prior to or together with any reports, information, or applications signed by a duly authorized representative.

3. **Billing information.** Indicate to whom the annual permit fee should be billed.

4. **Design Professional Engineer's Information.** Provide the name and contact information of the practicing professional engineer licensed to practice in California who designed the groundwater treatment system and certified the Engineering Certification Report. The Design Professional Engineer is also responsible for certifying any proposed changes to the groundwater treatment system.

5. **Operation and Maintenance Professional Engineer's Information.** Provide the name and contact information of the professional engineer licensed to practice in California who is responsible for the operations and maintenance procedures of the treatment facility and certification of its Operations and Maintenance Manual.

6. **Consulting Firm's Information.** Provide the name and contact information of the consultant working on behalf of the discharger.

G. Discharge Location Information

Provide a brief description of the discharge flow path from the exit point of the treatment system to the outfall(s) in the receiving water(s). Identify all points where the facility discharges wastewater to surface waters or storm drains and provide latitudes and longitudes (using decimal degrees with at least five decimal places). Identify the receiving waters to which discharges flow into (permitted discharges may flow through storm drains if authorized by storm drain system owners) and confirm if access to the receiving water(s) are unrestricted. Attach additional pages as necessary.

H. Treatment System Information

1. **General information.** Provide the groundwater treatment design capacity as certified by the Design Professional Engineer licensed to practice in California and as identified in section VI.D. Additionally, provide a narrative description of potential pollutants in the discharge. Finally, specify the frequency of discharge and estimated percentage of total effluent reclaimed for any applicable activities such as dust suppression, soil compaction, irrigation of landscape or agriculture, and industrial water supply. Please note that water reclamation consisting of recharge or reinjection is not authorized under this Order.

2. **Unit information.** Provide information on the quantity and type of units in the groundwater extraction and treatment system including any applicable characteristics such as size, capacity, ratings, depth, dosages, etc.

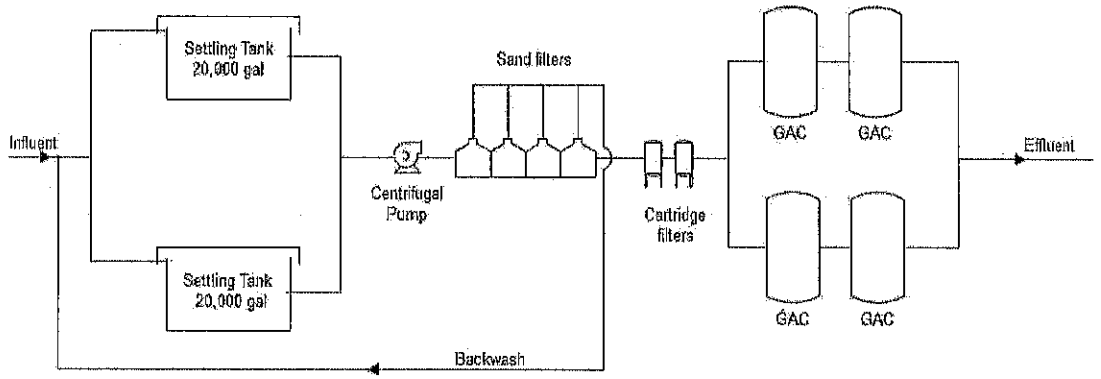
I. Engineering Certification Report

The Engineering Certification Report must be a comprehensive report detailing the process and components of the groundwater extraction and treatment system. It must provide background information regarding the site and project, and a summary of any environmental investigations of groundwater impacts at the site, if any. The description of treatment system components must include any dewatering wells, groundwater pumps, conveyance systems, storage tanks, settling tanks, process pumps, filtering vessels, granular activated carbon tanks, chemical injection systems, and pH adjustment equipment. Additionally, it must include the following:

A. **Location map.** A topographic map (or maps) showing the legal facility boundaries, location of treatment units and processes, intake and discharge point locations, and receiving waters (or storm drains).

B. **Discharge flow path map.** An aerial map or satellite image illustrating the proposed path of the discharge from the point of exit of the treatment system to the point of discharge in the receiving water. All applicable streets, land features, points of entry in the storm drain system, receiving waters, and distances must be labeled and displayed on the map.

C. **Process flow diagram.** A diagram showing the water flow from intake to discharge, including all treatment system components and applicable sampling ports (see example below). The diagram must indicate how the discharge flows from where it is generated to where it exits the treatment system and include approximate flows.



D. **Unit specification sheets.** Datasheets that provide engineering characteristics of each treatment system unit.

E. **Operation and maintenance procedures.** A copy of the Table of Contents from the Operation and Maintenance Manual of the treatment system.

The Engineering Certification Report shall certify the adequacy and reliability of the treatment system and comply with the Order's requirements. Finally, as required by the California Business and Professions Code section 6735, the report shall be prepared by, or under the supervision of, a Professional Engineer licensed to practice in California and shall be signed and stamped by the same.

ATTACHMENT C – NOTICE OF TERMINATION

Complete this Notice of Termination to request termination of coverage under NPDES Permit No. CA912004.

Groundwater Treatment Facility address:_____

CIWQS Place Identification Number: _____

Email an electronic copy of this form to **R2NPDES@waterboards.ca.gov** and send a confirmation email to the responsible staff member indicated at www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/general_permits.shtml.

DISCHARGE CATEGORY (select one)

- ☐ 1. Aquifer reclamation program well discharges (Category 1)
- ☐ 2. Reverse osmosis (RO) concentrate from aquifer reclamation program well discharges (Category 2).
- ☐ 3. Structural dewatering discharges (Category 3)

I, the Discharger, certify under penalty of law that this notice is prepared under my direction or supervision and the final date of this discharge was _____. I am aware that discharging without authorization is a violation of the California Water Code.

_____

Name (print) Signature and Date

_____

Title/Organization (Discharger's Organization)

_____

Address, email, and phone number

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS—PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

2. The Discharger shall comply with effluent standards or prohibitions established under CWA section 307(a) for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

G. Bypass

1. Definitions

a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)

b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)

2. **Bypass not exceeding limitations.** The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)

3. **Prohibition of bypass.** Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment

should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and

c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)

4. **Approval.** The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions—Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

5. **Notice**

a. **Anticipated bypass.** If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. The notice shall be sent to the Regional Water Board. As of December 21, 2020, a notice shall also be submitted electronically to the initial recipient in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(i).)

b. **Unanticipated bypass.** The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the Regional Water Board. As of December 21, 2020, a notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22 and 40 C.F.R. part 127.(40 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

1. **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)

2. **Conditions necessary for a demonstration of upset.** A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):

a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));

b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));

c. The Discharger submitted notice of the upset as required in Standard Provisions—Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and

d. The Discharger complied with any remedial measures required under Standard Provisions—Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)

3. **Burden of proof.** In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS—PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. §§ 122.41(l)(3), 122.61.)

III. STANDARD PROVISIONS—MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)

B. Monitoring must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or required under 40 C.F.R. chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

1. The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either (a) the method ML is at or below the level of the applicable water quality criterion for the measured pollutant or pollutant parameter, or (b) the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N, for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. chapter 1, subchapters N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. §§ 1221.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).

IV. STANDARD PROVISIONS—RECORDS

A. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include the following:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));

3. The date(s) the analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and

6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and

2. Permit applications and attachments, permits, and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS—REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, §§ 13267, 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions—Reporting V.B.2, V.B.3, V.B.4, and V.B.5, and V.B.6 below. (40 C.F.R. § 122.41(k).)

2. For a corporation, all permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)

   For a partnership or sole proprietorship, all permit applications shall be signed by a general partner or the proprietor, respectively. (40 C.F.R. § 122.22(a)(2).)

   For a municipality, state, federal, or other public agency, all permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). (40 C.F.R. § 122.22(a)(3).).

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions—Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

   c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions—Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5. Any person signing a document under Standard Provisions—Reporting V.B.2 or V.B.3 above shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

6. Any person providing electronic signature for documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all relevant requirements of 40 C.F.R. part 3 (Cross-Media Electronic Reporting) and 40 C.F.R part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R. § 122.22(e).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order. (40 C.F.R. § 122.22(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J and comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR reporting form specified by the Regional Water Board or State Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

   For noncompliance related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time discovery) as well as the type of event (i.e., combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g., manhole, combiened sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.

   As of December 21, 2020, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the Regional Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R part 127. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours:

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)

   b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral and written report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 C.F.R. section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (Alternatively, for an existing manufacturing, commercial, mining, or silvicultural discharge as referenced in 40 C.F.R. section 122.42(a), this notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under 40 C.F.R. section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1).) (40 C.F.R. § 122.41(l)(1)(ii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions—Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision—Reporting V.E above. For noncompliance related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section (40 C.F.R. § 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

J. Initial Recipient for Electronic Reporting Data

The owner, operator, or duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the initial recipient defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. § 127.2(c)]. U.S. EPA will update and maintain this list. (40 C.F.R. § 122.41(l)(9).)

VI. STANDARD PROVISIONS—ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this Order under several provisions of the Water Code, including, but not limited to, sections 13268, 13350, 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS—NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):
   a. 100 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(1)(i));
   b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));
   c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or
   d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)
2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(2)):
   a. 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));
   b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));
   c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
   d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 C.F.R. § 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to CWA sections 301 or 306 if it were directly discharging those pollutants (40 C.F.R. § 122.42(b)(1)); and

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of this Order. (40 C.F.R. § 122.42(b)(2).)

3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 C.F.R. § 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Contents

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Clean Water Act section 308 and 40 C.F.R. sections 122.41(h), 122.41(j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement federal and State laws and regulations.

I. GENERAL MONITORING PROVISIONS

A. The Discharger shall comply with this MRP. The Executive Officer may amend this MRP pursuant to 40 C.F.R. sections 122.62, 122.63, and 124.5.

B. The Discharger shall conduct all monitoring in accordance with Attachment D section III. Equivalent test methods must be more sensitive than those specified in 40 C.F.R. part 136 and must be specified in this Order or the Discharger's Authorization to Discharge. Water and waste analyses shall be performed by a laboratory certified for these analyses in accordance with Water Code section 13176.

C. All monitoring instruments, flowmeters, and equipment shall be properly calibrated according to manufacturer's instructions and maintained to ensure accurate measurements. Flow meters shall be calibrated at least once during this Order's term.

II. MONITORING LOCATIONS

The Discharger shall establish monitoring locations as set forth below to demonstrate compliance with this Order:

Table E-1. Monitoring Locations

Monitoring Location Type	Monitoring Location Name[1]	Monitoring Location Description
Influent	INF-001 through INF-*n* (where *n* is a sequential number above 001)	A point in each extraction system immediately prior to any treatment unit.
Effluent	EFF-001 through EFF-*n* (where *n* is a sequential number above 001)	A point in each discharge line immediately following treatment and before the effluent joins or is diluted by any other wastewater or water body.[2]
Reclaimed Water	REC-001through REC-*n* (where *n* is a sequential number above 001)	A point in each discharge line following treatment and immediately prior to reclamation.[5]
Receiving Water	RSW-001U through RSW-*n*U (where *n* is a sequential number above 001)[3]	A point 50 feet upstream from each point of discharge into the receiving water or, if access is limited, the first accessible point upstream.[4]
	RSW-001D through RSW-*n*D (where *n* is a sequential number above 001)[3]	A point 50 feet downstream from each point of discharge into the receiving water or, if access is limited, the first accessible point downstream.[4]

Footnotes:

[1] The previous order used the following monitoring location names: INF-001, EFF-001, RSW-001U, RSW-001D, and REU-001. This Order accounts for the potential for individual facilities to have more than one treatment system and discharge location.

[2] If the effluent is discharged to a storm drain prior to reaching the receiving water, the monitoring location shall be a point before the effluent commingles with storm drain water.

[3] If there is only one outfall, the Discharger shall use the names RSW-001U and RSW-001D. Otherwise, the Discharger shall use RSW-001U and RSW-001D for Discharge Point No. 001, RSW-002U and RSW-002D for Discharge Point No. 002, and so on.

[4] A Discharger that cannot safely access receiving water within 50 feet of the outfall may collect samples at the nearest safe alternative location after receiving written Executive Officer concurrence. Upstream receiving water monitoring is not required where there is no upstream receiving water.

[5] This monitoring location is unnecessary if no effluent is reclaimed or if the effluent at Monitoring Location EFF-*n* would be the same as the effluent at Monitoring Location REC-*n*.

III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor influent at Monitoring Locations INF-001 through INF-*n* in accordance with Table E-2 for Category 1 discharges, Table E-3 for Category 2 discharges, or Table E-4 for Category 3 discharges:

Table E-2. Minimum Monitoring Requirements for Category 1 Discharges

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
Flow	GPM/GPD/ MGM	--	Continuous	--	Continuous[1]	--
Electrical Conductivity	S/m	EPA 120.1 or SM2510B	Grab	--	1/Quarter	--
pH	standard units	EPA 150.2	Grab		1/Quarter	[2]
Temperature	°C	--	Grab	--	1/Quarter	--
Turbidity	NTU	EPA 180.1 or SM2130B	Grab	--	1/Quarter	--
Total Dissolved Solids	mg/L	--	--	--	1/Quarter	--
Dissolved Oxygen	mg/L	--	--	--	1/Quarter	[2]
Hardness (as $CaCO_3$)	mg/L	EPA 130.1 or SM2340B	Grab	--	1/Year	[2]
Salinity	‰	--	Grab	--	1/Quarter	[2]
Chloride	mg/L	--	--	--	1/Quarter	--
Total Chlorine Residual[3]	mg/L	Field Kit, EPA 330, or SM4500-Cl	Grab	--	1/Quarter	[2]
Antimony, Total Recoverable	µg/L	EPA 204.2 or EPA 200.8	Grab	--	1/Year	--
Arsenic, Total Recoverable	µg/L	EPA 206.3 or EPA 200.8	Grab	--	1/Year	--
Beryllium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
Cadmium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--
Chromium III[4]	µg/L	--	Grab	--	1/Year	--
Chromium VI[4]	µg/L	SM3500 or EPA 218.6	Grab	--	1/Year	--
Copper, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--
Lead, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--
Mercury, Total Recoverable[5]	µg/L	EPA 1631	Grab	--	1/Year	--
Nickel, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--
Selenium, Total Recoverable	µg/L	EPA 200.8 or SM 3114B or C	Grab	--	1/Year	--
Silver, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--
Thallium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--
Zinc, Total Recoverable	µg/L	EPA 200.8	Grab	--	1/Year	--
Cyanide, Total	µg/L	SM 4500-CN- C or I or SM 4500-CN- E	Grab	--	1/Year	--
Volatile Organic Compounds (VOCs)[6]	µg/L	EPA 8260B (full list)	Grab	--	Once	--
Semi-volatile organic compounds (SVOCs) excluding polynuclear aromatic hydrocarbons (PAHs)[7]	µg/L	EPA 8270C	Grab	--	Once	--
PAHs	µg/L	EPA 610 or EPA 8270C	Grab	--	Once	--
TPHs as Gasoline[8]	µg/L	EPA 8260B	Grab	--	Once	--

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
		Modified or EPA 8015B Modified				
TPHs as Diesel[8]	µg/L	EPA 8015B Modified	Grab	--	Once	--
TPHs other than Gasoline and Diesel[8]	µg/L	EPA 8015B Modified	Grab	--	Once	--
Acute Toxicity	% survival	See MRP section V	Grab	--	1/Year	--
Standard Observations	--	--	--	--	1/Quarter[9]	[2]

Abbreviations

GPM = gallons per minute
GPD = gallons per day
MGM = million gallons per month
NTU = nephelometric turbidity units
% survival = percent survival
mg/L = milligrams per liter
µg/L = micrograms per liter
‰ = parts per thousand
S/m = Siemens per meter
SM = Standard Method

Footnotes:

[1] Flows shall be measured continuously in gallons per minute (GPM). Flows shall be recorded as gallons per day (GPD) and million gallons per month (MGM). Flows shall be monitored using a flow meter or estimated if no flow meter is in place. The Executive Officer may require flow meter installation.

[2] Receiving water shall be monitored after an effluent limit violation in accordance with MRP section IV.D. Receiving water monitoring shall occur on the same calendar day as effluent confirmation monitoring. Receiving water samples shall be analyzed for each violated effluent parameter.

[3] Chlorine residual shall be monitored in effluent if chlorine is used during treatment.

[4] Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 µg/L).

[5] The Discharger shall sample and analyze mercury using ultra-clean techniques as described in U.S. EPA methods 1669 and 1631 to eliminate the possibility of sample contamination.

[6] The analytes shall include those listed in *USEPA SW-846 Test Method 8260 B: Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (December 1996) except internal standard and surrogate compounds.

[7] Monitoring of bis(2-ethylhexyl)phthalate shall be performed using ultra clean sampling techniques.

[8] TPHs shall be analyzed without silica-gel cleanup.

[9] For reclaimed water only.

Table E-3. Minimum Monitoring Requirements for Category 2 Discharges

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
Flow	GPM/GPD/ MGM	--	Continuous	--	Continuous[1]	--

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
Electrical Conductivity	S/m	EPA 120.1 or SM2510B	Grab	--	1/Month	--
pH	standard units	EPA 150.2	Grab		1/Month	[2]
Temperature	°C	--	Grab	--	1/Quarter	--
Turbidity	NTU	EPA 180.1 or SM2130B	Grab	--	1/Month	1/Month [2]
Total Dissolved Solids	mg/L	--	--	--	1/Month	--
Dissolved Oxygen	mg/L	--	--	--	1/Month	[2]
Hardness (as $CaCO_3$)	mg/L	EPA 130.1 or SM2340B	Grab	--	1/Quarter	[2]
Salinity	‰	--	Grab	--	1/Month	[2]
Chloride	mg/L	--	--	--	1/Month	--
Total Chlorine Residual[3]	mg/L	Field Kit, EPA 330, or SM4500-Cl	Grab	--	1/Day	[2]
Antimony, Total Recoverable	µg/L	EPA 204.2 or EPA 200.8	Grab	--	1/Quarter	--
Arsenic, Total Recoverable	µg/L	EPA 206.3 or EPA 200.8	Grab	--	1/Quarter	--
Beryllium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--
Cadmium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--
Chromium III[4]	µg/L	--	Grab	--	1/Quarter	--
Chromium VI[4]	µg/L	SM3500 or EPA 218.6	Grab	--	1/Quarter	--
Copper, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--
Lead, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--
Mercury, Total Recoverable[5]	µg/L	EPA 1631	Grab	--	1/Quarter	--
Nickel, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
Selenium, Total Recoverable	µg/L	EPA 200.8 or SM 3114B or C	Grab	--	1/Quarter	--
Silver, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--
Thallium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--
Zinc, Total Recoverable	µg/L	EPA 200.8	Grab	--	1/Quarter	--
Cyanide, Total	µg/L	SM 4500-CN- C or I or SM 4500-CN- E	Grab	--	1/Quarter	--
Volatile Organic Compounds (VOCs)[6]	µg/L	EPA 8260B (full list)	Grab	--	Once	--
Semi-volatile organic compounds (SVOCs) excluding polynuclear aromatic hydrocarbons (PAHs)[7]	µg/L	EPA 8270C	Grab	--	Once	--
PAHs	µg/L	EPA 610 or EPA 8270C	Grab	--	Once	--
TPHs as Gasoline[8]	µg/L	EPA 8260B Modified or EPA 8015B Modified	Grab	--	Once	--
TPHs as Diesel[8]	µg/L	EPA 8015B Modified	Grab	--	Once	--
TPHs other than Gasoline and Diesel[8]	µg/L	EPA 8015B Modified	Grab	--	Once	--
Acute Toxicity	% survival	See MRP section V	Grab	--	1/Month, then 1/Quarter[9]	--
Standard Observations	--	--	--	--	1/Quarter[10]	[2]

Abbreviations

GPM = gallons per minute
GPD = gallons per day
MGM = million gallons per month

NTU = nephelometric turbidity units
% survival = percent survival
mg/L = milligrams per liter
µg/L = micrograms per liter
‰ = parts per thousand
S/m = Siemens per meter
SM = Standard Method

Footnotes:

[1] Flows shall be measured continuously in gallons per minute (GPM). Flows shall be recorded as gallons per day (GPD) and million gallons per month (MGM). Flows shall be monitored using a flow meter or estimated if no flow meter is in place. The Executive Officer may require flow meter installation.

[2] Receiving water shall be monitored after an effluent limit violation in accordance with MRP section IV.D. Receiving water monitoring shall occur on the same calendar day as effluent confirmation monitoring. Receiving water samples shall be analyzed for each violated effluent parameter.

[3] Chlorine residual shall be monitored in effluent if chlorine is used during treatment.

[4] Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 µg/L).

[5] The Discharger shall sample and analyze mercury using ultra-clean techniques as described in U.S. EPA methods 1669 and 1631 to eliminate the possibility of sample contamination.

[6] The analytes shall include those listed in *USEPA SW-846 Test Method 8260 B: Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (December 1996) except internal standard and surrogate compounds.

[7] Monitoring of bis(2-ethylhexyl)phthalate shall be performed using ultra clean sampling techniques.

[8] TPHs shall be analyzed without silica-gel cleanup.

[9] Acute toxicity shall be monitored monthly for the first year of operation and quarterly thereafter. If the Discharger violates an acute toxicity effluent limitation, it shall monitor monthly for at least one year after it achieves compliance. This is in addition to confirmation monitoring required by MRP section IV.D.

[10] For reclaimed water only.

Table E-4. Minimum Monitoring Requirements for Category 3 Discharges

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
Flow	GPM/GPD/ MGM	--	Continuous	--	Continuous[1]	--
Electrical Conductivity	S/m	EPA 120.1 or SM2510B	Grab	--	1/Year	--
pH	standard units	EPA 150.2	Grab		1/Month, then 1/Quarter	[2]
Temperature	°C	--	Grab	--	1/Year	--
Turbidity	NTU	EPA 180.1 or SM2130B	Grab	[2]	1/Month, then 1/Quarter	[2]
Total Dissolved Solids	mg/L	--	--	--	1/Month	--
Dissolved Oxygen	mg/L	--	--	--	1/Year	[2]
Hardness (as $CaCO_3$)	mg/L	EPA 130.1 or SM2340B	Grab	--	1/Year	[2]
Salinity	‰	--	Grab	--	1/Year	[2]
Chloride	mg/L	--	--	--	1/Year	--
Total Chlorine Residual[3]	mg/L	Field Kit, EPA 330, or SM4500-Cl	Grab	--	1/Day	[2]

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
Antimony, Total Recoverable	µg/L	EPA 204.2 or EPA 200.8	Grab	--	1/Two Years	[2]
Arsenic, Total Recoverable	µg/L	EPA 206.3 or EPA 200.8	Grab	--	1/Two Years	[2]
Beryllium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Two Years	[2]
Cadmium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Two Years	[2]
Chromium III[4]	µg/L	--	Grab	--	1/Two Years	[2]
Chromium VI[4]	µg/L	SM3500 or EPA 218.6	Grab	--	1/Two Years	[2]
Copper, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	[2]	1/Year	[2]
Lead, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Two Years	[2]
Mercury, Total Recoverable[5]	µg/L	EPA 1631	Grab	--	1/Two Years	[2]
Nickel, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	[2]	1/Year	[2]
Selenium, Total Recoverable	µg/L	EPA 200.8 or SM 3114B or C	Grab	[2]	1/Year	[2]
Silver, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Two Years	[2]
Thallium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Two Years	[2]
Zinc, Total Recoverable	µg/L	EPA 200.8	Grab	--	1/Two Years	[2]
Cyanide, Total	µg/L	SM 4500-CN- C or I or SM 4500-CN- E	Grab	[2]	1/Year	[2]
Volatile Organic Compounds (VOCs)[6]	µg/L	EPA 8260B (full list)	Grab	--	Once	--
Semi-volatile organic compounds (SVOCs) excluding polynuclear	µg/L	EPA 8270C	Grab	--	Once	--

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
aromatic hydrocarbons (PAHs)[7]						
PAHs	µg/L	EPA 610 or EPA 8270C	Grab	--	Once	--
TPHs as Gasoline[8]	µg/L	EPA 8260B Modified or EPA 8015B Modified	Grab	--	Once	--
TPHs as Diesel[8]	µg/L	EPA 8015B Modified	Grab	--	Once	--
TPHs other than Gasoline and Diesel[8]	µg/L	EPA 8015B Modified	Grab	--	Once	--
Acute Toxicity	% survival	See MRP section V	Grab	--	1/Two Years [9]	--
Standard Observations	--	--	--	--	1/Quarter[10]	[2]

Abbreviations

GPM = gallons per minute
GPD = gallons per day
MGM = million gallons per month
NTU = nephelometric turbidity units
% survival = percent survival
mg/L = milligrams per liter
µg/L = micrograms per liter
‰ = parts per thousand
S/m = Siemens per meter
SM = Standard Method

Footnotes:

[1] Flows shall be measured continuously in gallons per minute (GPM). Flows shall be recorded as gallons per day (GPD) and million gallons per month (MGM). Flows shall be monitored using a flow meter or estimated if no flow meter is in place. The Executive Officer may require flow meter installation.

[2] Influent and receiving water shall be monitored after an effluent limit violation in accordance with MRP section IV.D. Influent and receiving water monitoring shall occur on the same calendar day as effluent confirmation monitoring. Influent and receiving water samples shall be analyzed for each violated effluent parameter.

[3] Chlorine residual shall be monitored in effluent if chlorine is used during treatment.

[4] Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 µg/L).

[5] The Discharger shall sample and analyze mercury using ultra-clean techniques as described in U.S. EPA methods 1669 and 1631 to eliminate the possibility of sample contamination.

[6] The analytes shall include those listed in *USEPA SW-846 Test Method 8260 B: Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (December 1996) except internal standard and surrogate compounds.

[7] Monitoring of bis(2-ethylhexyl)phthalate shall be performed using ultra clean sampling techniques.

[8] TPHs shall be analyzed without silica-gel cleanup.

[9] Acute toxicity shall be monitored concurrently with metals.

[10] For reclaimed water only.

IV. EFFLUENT MONITORING REQUIREMENTS

A. When discharging, the Discharger shall monitor effluent at Monitoring Locations EFF-001 through EFF-*n* in accordance with Table E-2 for Category 1 discharges, Table E-3 for Category 2 discharges, or Table E-4 for Category 3 discharges.

B. Grab samples shall be collected on random days during periods of daytime maximum flow (if flow varies significantly during the day).

C. When any type of bypass occurs, grab samples shall be collected daily for the duration of the bypass for all constituents at all affected discharge points that have effluent limits.

D. If effluent monitoring results indicate a violation of any effluent limitation, the Discharger shall take a confirmation effluent sample and receiving water samples within 24 hours of becoming aware of the violation. For Category 3 discharges, the Discharger shall also take influent samples within 24 hours of becoming aware of the violation. The Discharger shall have all these samples analyzed by expedited methods and obtain results within 24 hours of sample collection. The Discharger shall request the shortest turnaround time possible if results cannot be obtained within 24 hours. If the confirmation sample also violates the effluent limit, the Discharger shall cease discharge until it has determined and corrected the cause of the violation. In this case, both the initial and confirmation results are violations. However, if the confirmation sample indicates compliance, only the initial result is a violation and the Discharger may continue discharging.

E. The Discharger shall not discharge when a known effluent limit violation exists just to comply with receiving water monitoring requirements.

F. The Discharger shall monitor acute toxicity as follows:

1. Compliance with the acute toxicity effluent limitations shall be evaluated by measuring survival of test organisms exposed to 96-hour static renewal bioassays. Samples shall be collected on days coincident with effluent sampling.

2. Rainbow trout (*Oncorhynchus mykiss*) shall be the test species when the effluent is discharged to freshwater. Sheepshead minnow (*Cyprinodon variegatus*) shall be the test species when the effluent is discharged to estuarine or marine waters. If the Discharger was enrolled under the previous order, it may use the test species specified at that time until further notice. The Executive Officer may specify a more sensitive species or, if testing a particular species proves unworkable, the most sensitive species available.

3. All bioassays shall be performed according to 40 C.F.R. part 136, currently *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 5th Edition (EPA-821-R-02-012), with exceptions granted in writing by the Executive Officer and the Environmental Laboratory Accreditation Program upon a Discharger request with justification.

4. If a Discharger demonstrates that specific identifiable substances in the discharge are rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after test samples are adjusted to remove the influence of those substances. Written acknowledgement that the Executive Officer concurs with the

Discharger's demonstration and that the adjustment will not remove the influence of other substances must be obtained prior to any such adjustment.

5. Bioassay water monitoring shall include, on a daily basis, pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported. If final or intermediate results of an acute bioassay test indicate a violation or threatened violation (e.g., the percentage of surviving test organisms is less than 70 percent), the Discharger shall initiate a new test as soon as practical and shall investigate the cause of the mortalities and report its findings in the next self-monitoring report. The Discharger shall repeat the test until a test fish survival rate of 90 percent or greater is observed. If the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new fish and shall continue as soon as practical until an acceptable test is completed (i.e., the control fish survival rate is 90 percent or greater).

V. RECLAMATION MONITORING REQUIREMENTS

The Discharger shall monitor reclaimed water at Monitoring Locations REC-001 through REC-*n* as shown in Table E-2 for Category 1 discharges, Table E-3 for Category 2 discharges, and Table E-4 for Category 3 discharges.

VI. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger shall monitor receiving waters at Monitoring Locations RSW-001U through RSW-*n*U and RSW-001D through RSW-*n*D as indicated in Table E-2 for Category 1 discharges, Table E-3 for Category 2 discharges, and Table E-4 Category 3 discharges.

A. For tidally-influenced receiving waters, samples shall be collected within 1 hour following low slack water. Where sampling at lower slack water period is impractical, sampling shall be performed during higher slack water.

B. Samples shall be collected within one foot of the surface of the receiving water. The Discharger shall explain any deviation from this requirement in its monitoring report if this requirement cannot be met.

C. Receiving water monitoring is not required when there is no water in the receiving water other than the discharge.

VII. OTHER MONITORING REQUIREMENTS

A. Chemical Additives Monitoring

The Discharger shall conduct monitoring as necessary pursuant to its treatment system design specifications and Operations and Maintenance Manual, and maintain records in accordance with Attachment D section IV.A.

B. Standard Observations

1. **All Authorized Treatment Systems.** At a quarterly frequency, the Discharger shall conduct standard observations at its groundwater treatment systems as follows:

   a. Odor: presences or absence, characterization, source, distance of travel, and wind direction.

b. Weather condition:

i. Air temperature;

ii. Wind direction and estimated velocity; and

iii. Total precipitation during the five days prior to observation.

c. Deposits, discolorations, or plugging in the conveyance system that could adversely affect system reliability or performance.

d. Operation of valves, outlets, sprinkler heads, and pressure shutoff valves in conveyance system.

2. **Reclaimed Water**. As set forth in Tables E-2, E-3, and E-4, the Discharger shall conduct standard observations as follows:

a. Floating and suspended materials of waste origin (e.g., oil, grease, algae, sand, or other macroscopic particulate matter): presence or absence, source, and size of affected area.

b. Discoloration and turbidity: description of color, source, and size of affected area.

c. Odor: presences or absence, characterization, source, distance of travel, and wind direction.

d. Weather condition:

i. Air temperature;

ii. Wind direction and estimated velocity; and

iii. Total precipitation during the five days prior to observation.

e. Deposits, discolorations, or plugging in the conveyance system that could adversely affect system reliability or performance.

f. Operation of valves, outlets, sprinkler heads, and pressure shutoff valves in conveyance system.

3. **Receiving Water**. As set forth in Tables E-2, E-3, and E-4, whenever there is an effluent limit violation the Discharger shall conduct standard observations as follows:

a. Floating and suspended materials (e.g., oil, grease, algae, sand, or other macroscopic particulate matter): presence or absence, source, and size of affected area.

b. Discoloration and turbidity: description of color, source, and size of affected area.

c. Odor: presence or absence, characterization, source, distance of travel, and wind direction.

d. Beneficial water use: presence of water-associated waterfowl or wildlife, fisherpeople, and recreational activities in the vicinity of each receiving water monitoring location.

e. Hydrographic condition, if relevant:

i. Time and height of corrected high and low tides (corrected to nearest National Oceanic and Atmospheric Administration location for the sampling data and time of sample and collection); and

ii. Depth of water columns.

f. Weather condition:

i. Air temperature;

ii. Wind direction and estimated velocity; and

iii. Total precipitation during the five days prior to observation.

C. Minimum Levels

1. **Total Residual Chlorine.** The minimum level (ML) and reporting level (RL) for total residual chlorine shall be 0.1 mg/L. The Discharger shall calibrate and maintain total residual chlorine analyzers to reliably quantify values of 0.1 mg/L and greater.

2. **Metals.** Metals shall be analyzed for total (unfiltered) constituents with RLs not exceeding the MLs specified in Attachment G.

3. **All Other Pollutants.** All other pollutants shall be analyzed with RLs not exceeding the MLs specified in Attachment G.

VIII. REPORTING

A. General Reporting Requirements

The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

B. Self-Monitoring Reports

1. **Format.** The Discharger shall submit Self-Monitoring Reports (SMRs) and cover letters via email to RB2NPDES@waterboards.ca.gov and as further detailed in its Authorization to Discharge. At any time during the term of this Order, the State or Regional Water Board may notify the Discharger to electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) website (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS website will provide additional information for SMR submittal in the event of a planned service interruption for electronic submittal.

2. **Due Dates and Contents.** The Discharger shall submit quarterly SMRs and annual SMRs by the due dates and with the contents specified below. If there has been no discharge during the entire reporting period, quarterly and annual reports must still be submitted to report the status of the discharge.

a. **Quarterly SMRs** — Quarterly SMRs shall be due no later than 45 days after the end of each calendar quarter and shall contain the following:

i. Applicable items described in Standard Provisions V.B and V.C.

ii. Transmittal letter attached to each quarterly SMR that includes the following:

(a) CIWQS ID of the permitted facility.

(b) Operating status of the treatment facility during the reporting period.

(c) Clear identification of any violations of the Order or a clear statement that there were no violations.

(d) Detailed description of any permit violations, their causes, and corrective actions taken or planned to resolve the violations and prevent recurrences. If previous reports address the corrective actions, reference to the earlier reports is satisfactory.

(e) Any claims for data invalidation. Data should not be submitted in an SMR if it does not meet quality assurance/quality control standards. However, if the Discharger wishes to invalidate any measurement after it was submitted in an SMR, a letter shall identify the measurement suspected to be invalid and state the Discharger's intent to submit, within 60 days, a formal request to invalidate the measurement. This request shall include the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports invalidation [e.g., laboratory sheet, log entry, test results], and the corrective actions taken or planned [with a time schedule for completion] to prevent recurrence of the sampling or measurement problem.

(f) **Signature.** The transmittal letter shall be signed in accordance with Standard Provision V.B.

iii. Introductory section with site background information (e.g., location). A summary table for each monitored parameter with respective monitoring frequencies shall be included.

iv. Results of analyses and observations as follows:

(a) Tabulated data showing daily effluent flow for each day of the month, in gallons per (GPD), and total gallons for the month, in million gallons per month (MGM).

(b) Calculations for all limitations that require averaging of measurements shall use an arithmetic mean unless otherwise specified in MRP section IX.B.4.

(c) Summary of treatment system status during the reporting (e.g., in operation/on standby) and reason(s) for non-routine treatment system shut down.

(d) Statement of maximum discharge flow (gpm) during the reporting period.

(e) Tabulated data containing all numerical monitoring results (analytical and field). The numerical results shall include information such as source of sample (i.e., effluent, receiving water), constituent, analytical method, calculation type, laboratory qualifier, units, MDL, RL, sampling date, analysis date, report name and applicable comments or observations, if any. Any special methods shall be identified and should have prior approval of the Executive Officer.

(f) Tabular summary of all required Standard Observations.

(g) Tabular summary of total effluent volume reclaimed during the reporting period, if any, in million gallons (MG) per month.

(h) All new monitoring results obtained since the last SMR was submitted. If the analytical data for samples collected during a calendar quarter are unavailable, the data shall be included in the next SMR.

v. Field instrument calibration records (in an appendix).

vi. Complete description of maintenance activities performed on the treatment system consistent with the latest Operations and Maintenance Manual.

b. Annual Reports — Annual reports shall be due February 15 each year, covering the previous calendar year. Annual reports shall cover the period of January 1 through December 31. Annual reports shall contain the items described below:

i. Annual compliance summary.

ii. Annual flow in million gallons per year (MGY).

iii. Date of most recent flow meter calibration and date for next flow meter calibration. Flow meters shall be calibrated once per permit term by a third party. Calibration certifications shall be included in an appendix.

iv. Comprehensive discussion of treatment system performance during the reporting period. This summary shall include any corrective actions taken or planned, such as changes to equipment or operations that may be needed to achieve compliance. In addition, the Discharger shall discuss any other actions taken or planned that are intended to improve the performance and reliability of the Discharger's practices.

v. Graphical summaries of monitoring data for parameters that exceeded effluent limitations. The Discharger shall identify trends, if any, in pollutant concentrations found in influent and effluent for the year and since the initial discharge.

vi. Tabular summary of total effluent reclaimed during the annual reporting period, if any. The Discharger shall report total volumes in million gallons (MG) for the year and since the initial discharge.

vii. Description of the review and evaluation procedures of the treatment facility, results of the review and evaluation, and any capital improvement projects implemented or planned.

viii. Description of the review and evaluation procedures the Operation and Maintenance Manuals and any changes.

ix. Documentation that the annual fee has been paid.

3. **Monitoring Periods.** Monitoring periods for all required monitoring shall be completed as set forth in the table below:

Table E-5. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period[1]
Continuous	First day of discharge	All times while the facility is discharging
1/Day	First day of discharge	Midnight through 11:59 p.m.
1/Month	First day of calendar month after first day of discharge	First day of calendar month through last day of calendar month
1/Quarter	Closest January 1, April 1, July 1, or October 1 before or after first day of discharge	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31
1/Year	Closest January 1 before or after first day of discharge	January 1 through December 31
1/ Two Years	Closest January 1 before or after first of day discharge	January 1 through December 31 of the following year
Once	January 1 after first day of discharge	Once such that the results are reported with the new NOI form required on the first page of the Order

Footnote:

[1] Reporting begins on the effective date of Authorization to Discharge.

4. **RL and MDL Reporting.** The Discharger shall report with each sample result the Reporting Level (RL) and Method Detection Limit (MDL) as set forth in this Order or as determined by the procedure in 40 C.F.R. part 136. The Discharger may select any analytical methods described in 40 C.F.R. part 136; however, RLs shall be below applicable water quality objectives (see Fact Sheet Table F-5) and effluent limitations (see Table 2 and Table 3 of the Order). Otherwise, RLs shall be as low as possible. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported. For purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means the laboratory considers appropriate.

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected" or "ND."

   d. The Discharger shall instruct laboratories to establish calibration standards so that the lowest calibration standard is at or below the minimum level (ML) specified below (or its equivalent if there is differential treatment of samples relative to calibration standards). At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve. The MLs for priority pollutants are included in Attachment G.

5. Compliance Determination

a. Compliance with effluent limitations shall be determined using sample reporting protocols defined above and in the Fact Sheet and Attachments A and D. For purposes of reporting and administrative enforcement, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of a pollutant is greater than the effluent limitation and greater than or equal to the reporting level (RL).

b. When determining compliance with an average effluent limitation and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of detected but not quantified (DNQ) or nondetect (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

i. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

ii. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

C. Discharge Monitoring Reports

The Discharger shall submit Discharge Monitoring Reports (DMRs) in accordance with Attachment D section V.C.2 if instructed to do so by the Regional Water Board or State Water Board.

D. Violations and Unauthorized Discharges

1. The Discharger shall report by telephone and email to Regional Water Board staff (Authorizations to Discharge will identify contacts) who oversees the implementation of this Order within 24 hours of becoming aware of a bypass or violation of this Order.

2. The Discharger shall report spills to the California Office of Emergency Services (telephone 800-852-7550) only when spills meet or exceed applicable reportable quantities for hazardous materials.

3. The Discharger shall submit a written report to the Regional Water Board within five days following the telephone and email notification described above unless directed otherwise by Regional Water Board staff in writing. Electronic submittal is acceptable. The report shall include the following:

a. Date, time, and duration of violation or spill;

b. Location of violation or spill (map, street address, and description of location);

c. Nature of violation or material spilled;

d. Volume and quantity of any material involved;

e. Affected receiving water, if any;

f. Cause of violation or spill;

g. Estimated size of affected area;

h. Observed receiving water impacts (e.g., oil sheen, fish kill, or water discoloration);

i. Actions taken to correct violation or to contain, minimize, or clean up spill;

j. Future corrective actions planned to prevent recurrence and implementation schedule;

k. Spill Prevention, Control and Countermeasure Plan (SPCC) in effect, if any; and

l. Persons or agencies notified.

ATTACHMENT F - FACT SHEET

Contents

Tables

ATTACHMENT F – FACT SHEET

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order. As described in section II.B of the Order, the Regional Water Board incorporates this Fact Sheet as its findings supporting the issuance of the Order.

I. PERMIT INFORMATION

A. This Order regulates the discharge or reclamation (or both discharge and reclamation) of extracted brackish groundwater, reverse osmosis (RO) concentrate from treated brackish groundwater, and extracted groundwater resulting from structural dewatering requiring treatment. This Order reissues NPDES General Permit No. CAG912004, which the Regional Water Board issued through Order No. R2-2012-0060 (previous order) on August 8, 2012. About 13 facilities were enrolled under the previous order at any one time.

B. Site owners and operators that complete a Notice of Intent (NOI) form (Attachment B) and apply for Authorization to Discharge under this Order, and that are granted such authorization, are hereinafter called "Dischargers." For purposes of this Order, references to "discharger" or "permittee" in applicable federal and State laws, regulations, plans, and policies are held to be equivalent to references to any Discharger herein.

II. FACILITY DESCRIPTION

The Order covers discharges to surface waters, such as creeks, streams, rivers (including flood control canals), lakes, and the San Francisco Bay. Such discharges may occur directly or through constructed storm drain systems.

A. Wastewater Description

All discharges authorized under this Order originate as groundwater and require minimal or no treatment to meet effluent limits because they pose no significant water quality threat. However, groundwater may contain naturally-occurring or incidental pollutants, or various organic pollutants, at concentrations exceeding water quality criteria. Naturally-occurring pollutants of concern may include total dissolved solids (TDS) and common metals. In addition, discharges authorized by this Order may contain suspended and settleable solids and turbidity introduced through poorly constructed or deteriorating wells or by erosion and scouring of the banks or bottoms of receiving waters upon discharge. This Order also authorizes the discharge of RO concentrate resulting from the treatment of uncontaminated groundwater using RO. Such discharges may contain naturally-occurring dissolved pollutants present in well water (e.g., dissolved solids and common metals) concentrated by the RO process. In summary, this Order regulates the following three categories of discharges to surface water:

1. <u>Category 1:</u> **Aquifer reclamation program well discharges:** Groundwater extraction facilities operate to protect drinking water supply aquifers or other municipal facilities from saltwater intrusion. For example, the Alameda County Water District (ACWD) operates a series of wells along the southeast side of San Francisco Bay. Historically, the District discharged extracted brackish groundwater from the Fremont-Newark area to flood control channels. No facilities were enrolled under this category during the previous order term.

2. <u>Category 2:</u> **RO concentrate from aquifer reclamation program well discharges to estuarine or marine receiving waters**: Pumped groundwater may be treated using RO so

less saline groundwater may be returned to the drinking water supply. The RO concentrate is discharged as wastewater. For example, the Alameda County Water District operates an RO facility in Newark. Compliance with this Order is not required for RO concentrate sent to a sanitary sewer system. One facility was enrolled under this category during the previous order term.

3. <u>Category 3:</u> **Structural dewatering discharges of 10,000 gallons per day or greater requiring treatment for pollutants other than fuels and volatile organic compounds:** Dewatering systems under and around buildings, pipelines, and other facilities control groundwater incursion. For example, buildings and underpass structures may require continuous dewatering. Treatment is required where a physical, biological, or chemical treatment process is necessary for the discharge to comply with the requirements of this Order. The treatment may target naturally occurring compounds (e.g., sulfides, alkalinity, and acidity) that, if not treated, could pollute or contribute to pollution of receiving waters. This Order does not cover groundwater discharges that require treatment due to the presence of fuels or volatile organic compounds. Such discharges must seek coverage under NDPES Permit No. CAG912002. Twelve facilities were enrolled under this category during the previous order term.

B. Water Reclamation

Regional Water Board Resolution No. 88-160 (adopted October 19, 1988) urges dischargers of extracted groundwater to reclaim it. The resolution states that, when reclamation is not technically and economically feasible, treated effluent should be directed to a publicly-owned treatment works (POTW). Only if neither reclamation nor discharge to a POTW is technically and economically feasible, and if receiving water beneficial uses are not adversely affected, the Regional Water Board may authorize the discharge of treated and extracted groundwater in accordance with Waste Discharge Requirements (WDRs).

This Order allows reclamation of extracted treated groundwater in conjunction with discharge to surface waters. Reclamation can take many forms, such as landscape irrigation or industrial water supply.

C. Discharge Points and Receiving Waters

Dischargers may discharge to any San Francisco Bay Region surface water, including estuarine and tidally-influenced waters. Reclaimed water may be discharged to other waters of the State. Groundwater treatment facilities typically discharge effluent to storm drain systems, rivers, or creeks. The NOI form requires each Discharger to specify its discharge locations and to provide a map or diagram indicating the discharge path to surface waters.

D. Existing Requirements

Compliance with effluent limitations during the previous permit term was fairly consistent with only one exceedance reported for pH in December 2013. The previous order included the following effluent limitations:

Table F-1. Previous Effluent Limitations

Pollutant	Discharge to Receiving Waters Used as Drinking Water	Discharge to Other Receiving Waters
pH	Between 6.5 and 8.5 at all times	
Total Residual Chlorine	0.0 mg/L at all times	

Abbreviation:
mg/L = milligrams per liter

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

A. Legal Authorities

This Order serves as WDRs pursuant to California Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to Clean Water Act (CWA) section 402 and implementing regulations adopted by U.S. EPA and Water Code chapter 5.5, division 7 (commencing with § 13370). It shall serve as an NPDES permit for point source discharges to surface waters from enrolled facilities.

B. California Environmental Quality Act

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act, Public Resources Code division 13, chapter 3 (commencing with § 21100).

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The Regional Water Board adopted the *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, this Order implements State Water Board Resolution No. 88-63, which established State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Receiving water beneficial uses include the following:

   - Agricultural Supply
   - Areas of Special Biological Significance
   - Cold Freshwater Habitat
   - Ocean, Commercial and Sport Fishing
   - Estuarine Habitat
   - Freshwater Replenishment
   - Groundwater Recharge
   - Industrial Service Supply
   - Marine Habitat
   - Fish Migration
   - Municipal and Domestic Supply
   - Navigation
   - Industrial Process Supply
   - Preservation of Rare or Endangered Species
   - Water Contact Recreation

- Non-Contact Water Recreation
- Shellfish Harvesting
- Fish Spawning
- Warm Freshwater Habitat
- Wildlife Habitat

2. **Sediment Quality.** The State Water Board adopted the *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* on September 16, 2008, and it became effective on August 25, 2009. This plan supersedes other narrative sediment quality objectives and establishes new sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries. This Order implements the sediment quality objectives of this plan.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and amended it on May 4, 1995 and November 9, 1999. About 40 criteria in the NTR apply in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and incorporated the previously adopted NTR criteria that applied in the State. U.S. EPA amended the CTR on February 13, 2001. These rules contain water quality criteria for priority pollutants.

4. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria U.S. EPA promulgated for California through the NTR and the priority pollutant objectives the Regional Water Board established in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria U.S. EPA promulgated through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives, and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

5. **Safe Clean Water.** In compliance with Water Code section 106.3, it is State of California policy that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy because, as explained in Fact Sheet section IV.C.3.d, the reasonable potential analysis considers applicable water quality objectives, including maximum contaminant levels (MCLs) designed to protect human health and to ensure that water is safe for domestic use.

6. **Antidegradation Policy.** Federal regulations at 40 C.F.R. section 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy through State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," which is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. Permitted discharges must be consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.

7. **Anti-Backsliding Requirements.** CWA sections 402(o) and 303(d)(4) and 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that

effluent limitations in a reissued permit be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. This Order retains effluent limitations no less stringent than those established by previous orders.

8. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State, including protecting rare, threatened, or endangered species. The Discharger is responsible for meeting all applicable Endangered Species Act requirements.

D. Impaired Waters on CWA 303(d) List

In July 2015, U.S. EPA approved a revised list of impaired waters prepared pursuant to CWA section 303(d), which requires identification of specific waters where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Where it has not done so already, the Regional Water Board plans to adopt total maximum daily loads (TMDLs) for pollutants on the 303(d) list. TMDLs establish wasteload allocations for point sources and load allocations for non-point sources and are established to achieve the water quality standards for the impaired waters. Waters on the 303(d) list impaired by pollutants within the scope of this Order include, for example, Castro Cove in Richmond, Central San Francisco Bay, Mission Creek, Islais Creek, and Oakland Inner Harbor. The discharges regulated through this Order are not expected to contribute to any water quality impairment because this Order's effluent limitations are based on water quality objectives protective of receiving water beneficial uses. Facilities that discharge to waters with applicable TMDLs may be required to obtain coverage under an individual permit.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants discharged into waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of receiving waters.

A. Discharge Prohibitions

1. Prohibitions in this Order

a. **Discharge Prohibition III.A** (No discharge of waste at a location or in a manner different than that described in an NOI and Authorization to Discharge): This prohibition is based on 40 C.F.R. section 122.21(a) and Water Code section 13260, which require

filing an application and Report of Waste Discharge before discharge can occur. Discharges not described in an NOI and Authorization to Discharge are prohibited.

b. **Discharge Prohibition III.B** (No discharge of groundwater contaminated with volatile organic compounds [VOCs] or fuels): Discharges of VOC and fuel contaminated groundwater are beyond the scope of this Order.

c. **Discharge Prohibition III.C** (No discharge of silt, sand, clay, or other earthen materials): This prohibition is based on Basin Plan Table 4-1, Discharge Prohibition 9, which prohibits discharges of silt, sand, clay, or other earthen materials in quantities sufficient to cause deleterious bottom deposits, turbidity, or discoloration in surface waters, or to unreasonably affect or threaten to affect beneficial uses.

d. **Discharge Prohibition III.D** (No discharge of filter backwash water, membrane cleaning solutions, or other waste streams associated with reverse osmosis, other than reverse osmosis concentrate): Discharges of filter backwash water, membrane cleaning solutions, or other waste streams associated with reverse osmosis (other than RO concentrate) are beyond the scope of this Order.

e. **Discharge Prohibition III.E** (No discharges of well drilling fluids): Discharges of well drilling fluids are beyond the scope of this Order.

f. **Discharge Prohibition III.F** (No discharge of floating debris, oil, grease, scum, or other floating materials): This prohibition is based on Basin Plan Table 4-1, Discharge Prohibitions 8, which prohibits discharges of floating oil or other floating materials in quantities sufficient to cause deleterious bottom deposits, turbidity, or discoloration in surface waters. It is also based on Basin Plan Table 4-1, Discharge Prohibitions 13, which prohibits discharges of oil or any residuary product of petroleum, except in accordance with WDRs (these WDRs do not authorize such discharges).

g. **Discharge Prohibition III.G** (No discharge of pollutants so as to create pollution, contamination, or nuisance): This prohibition is based on Water Code section 13050, which prohibits the creation of pollution, contamination, or a nuisance conditions as the result of discharges.

h. **Discharge Prohibition III.H** (No discharge to a storm drain causing scouring or erosion, or causing or contributing to scouring of banks, excessive sedimentation, or flooding): This prohibition is based on Basin Plan section 4.19 and is consistent with the sediment and erosion control goals of the Municipal Regional Stormwater NPDES Permit (Permit No. CAS612008, Order No. R2-2015-0049).

i. **Discharge Prohibition III.I** (No bypass or overflow of untreated or partially-treated groundwater). This prohibition is based on 40 C.F.R. section 122.41(m), which generally prohibits bypasses. Attachment D section I.G provides for circumstances whereby bypasses may be approved.

j. **Discharge Prohibition III.J** (No water reclamation consisting of recharge or reinjection): Water reclamation activities consisting of recharge or reinjection are beyond the scope of this Order.

2. Exception to Shallow Water and Dead-End Slough Discharge Prohibition

Basin Plan Table 4-1, Discharge Prohibition 1, prohibits discharge of "any wastewater which has particular characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1... ." This prohibition is intended to provide an added degree of protection from the continuous effect of discharges and provide a buffer against the effects of abnormal discharges caused by temporary upsets or malfunctions. As explained in Basin Plan section 4.2, the Regional Water Board reviews requests for exceptions to this prohibition based in part on the reliability of a discharger's system in preventing inadequately treated wastewater from being discharged to the receiving water. Basin Plan section 4.2 allows exceptions in the following circumstances:

- An inordinate burden would be placed on the discharger relative to the beneficial uses protected, and an equivalent level of environmental protection can be achieved by alternate means;
- A discharge is approved as part of a reclamation project; or
- Net environmental benefits will be derived as a result of the discharge; or
- A discharge is approved as part of a groundwater cleanup project and, in accordance with Resolution No. 88-160 "Regional Board Position on the Disposal of Extracted Groundwater from Groundwater Clean-Up Projects," it has been demonstrated that neither reclamation nor discharge to a POTW is technically and economically feasible, and the discharger has provided certification of the adequacy and reliability of treatment facilities and a plan that describes procedures for proper operation and maintenance of all treatment facilities.

The Basin Plan further states:

> Significant factors to be considered by the Regional Water Board in reviewing requests for exceptions will be the reliability of the discharger's system in preventing inadequately treated wastewater from being discharged to the receiving water and the environmental consequences of such discharges.

This Order requires Dischargers to document in their NOIs that neither reclamation nor discharge to a POTW is technically and economically feasible (see Attachment B). In addition, Dischargers are required to certify the adequacy and reliability of any treatment facilities (see Attachment B) and maintain a plan that describes procedures for proper operation and maintenance of any treatment facilities (see Provision VI.C.4.b of the Order).

B. Technology-Based Effluent Limitations

1. Scope and Authority

CWA section 301(b) and 40 C.F.R. section 122.44 require that permits include conditions meeting technology-based requirements at a minimum and any more stringent effluent limitations necessary to meet water quality standards. The CWA requires that technology-based effluent limitations be established based on several levels of control:

a. **Best practicable treatment control technology (BPT).** BPT represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. **Best available technology economically achievable (BAT).** BAT represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. **Best conventional pollutant control technology (BCT).** BCT represents the control from existing industrial point sources of conventional pollutants, including biochemical oxygen demand, total suspended solids, fecal coliform, pH, and oil and grease. BCT standards are established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.

d. **New source performance standards (NSPS).** NSPS represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop effluent limitations, guidelines, and standards representing application of BPT, BAT, BCT, and NSPS. There are no promulgated effluent limitations, guidelines, or standards for discharges covered in this Order. Basin Plan Table 4-2 contains limitations on pH and total residual chlorine.

2. Applicable Limitations

The TBELs in this Order are based on Basin Plan Table 4-2:

Table F-2. Technology-Based Effluent Limitations

Pollutant	Instantaneous Effluent Limit
Total Residual Chlorine	0.0 mg/L
pH	6.5 – 8.5

Abbreviation:
mg/L = milligrams per liter

C. Water Quality-Based Effluent Limitations

1. Scope and Authority

This Order contains water quality-based effluent limitations (WQBELs) that implement water quality objectives that protect beneficial uses. CWA section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than federal technology-based requirements where necessary to achieve applicable water quality standards. According to 40 C.F.R. section 122.44(d)(1)(i), permits must include effluent limitations for all pollutants that are or may be discharged at levels that have a reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective, WQBELs must be established using (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting a narrative criterion, supplemented with relevant information (40 C.F.R. § 122.44[d][1][vi]). The process for determining reasonable potential and calculating WQBELs is intended to achieve applicable water quality objectives and criteria and to protect designated uses of receiving waters as specified in the Basin Plan. This Order imposes WQBELs for pollutants with reasonable potential to cause or contribute to exceedances of water quality standards.

2. Beneficial Uses and Water Quality Criteria and Objectives

Fact Sheet section III.C.1 identifies the potential beneficial uses of the receiving waters for discharges subject to this Order. Water quality criteria and objectives to protect these beneficial uses are described below:

a. **Basin Plan.** The Basin Plan specifies narrative and numeric water quality objectives for many pollutants to protect aquatic life and municipal and agricultural water supplies, including, among others, primary and secondary MCLs (see Basin Plan sections 3.3.21 and 3.3.22).

b. **CTR.** The CTR specifies numeric aquatic life and human health criteria for numerous priority pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries. Some human health criteria are for consumption of "water and organisms" and others are for consumption of "organisms only." Waters with the municipal or domestic supply beneficial use designation are subject to the "water and organisms" criteria.

c. **NTR.** The NTR establishes numeric aquatic life criteria for a number of pollutants for San Francisco Bay waters upstream to and including Suisun Bay and the San Joaquin-Sacramento River Delta.

d. **Sediment Quality Objectives.** The *Water Quality Control Plan for Enclosed Bays and Estuaries—Part 1, Sediment Quality* contains a narrative water quality objective: "Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities in bays and estuaries of California." This objective is to be implemented by integrating three lines of evidence: sediment toxicity, benthic

community condition, and sediment chemistry. The policy requires that if the Regional Water Board determines that a discharge has reasonable potential to cause or contribute to an exceedance of this objective, it is to impose the objective as a receiving water limit.

e. **Receiving Water Salinity.** Basin Plan section 4.6.2 (like the CTR and the NTR) states that the salinity characteristics (i.e., freshwater versus saltwater) of the receiving water are to be considered in determining the applicable water quality objectives. Freshwater criteria apply to discharges to waters with salinities equal to or less than one part per thousand (ppt) at least 95 percent of the time. Saltwater criteria apply to discharges to waters with salinities equal to or greater than 10 ppt at least 95 percent of the time in a normal water year. For discharges to waters with salinities between these two categories, or tidally-influenced freshwaters that support estuarine beneficial uses, the applicable water quality objectives are the lower of the salt or freshwater objectives (the latter calculated based on ambient hardness) for each substance.

   Receiving waters for the discharges this Order covers include San Francisco Bay, other estuarine and tidally-influenced waters, and inland freshwaters. In most cases, the reasonable potential analyses and WQBELs are based on the more stringent of the freshwater and saltwater criteria to fully protect all receiving waters. The reasonable potential analyses for copper and nickel also include analyses for discharges to freshwater, where saltwater criteria do not apply.

   The Basin Plan implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). Because of the marine influence on all reaches of San Francisco Bay and other tidally-influenced waters, total dissolved solids levels exceed 3,000 mg/L and thereby meet an exception to State Water Board Resolution No. 88-63.

f. **Receiving Water Hardness.** Some freshwater objectives for metals are hardness dependent (as hardness increases, the toxicity of certain metals decreases). In determining the freshwater water quality objectives that depend on hardness, a hardness value of 100 mg/L as $CaCO_3$ was used, which is conservative and generally protective of aquatic life in all circumstances contemplated by this permit. Mean and median hardness data collected through the Surface Water Ambient Monitoring Program are 250 mg/L and 232 mg/L. Values less than 100 mg/L were found primarily in Marin County, where dewatering activities rarely occur.

g. **Site Specific Translators.** NPDES regulations at 40 C.F.R. 122.45(c) require that effluent limitations for metals be expressed as total recoverable metal. Since water quality objectives for metals are typically expressed as dissolved metal, translators must be used to convert metals concentrations from dissolved to total recoverable and vice versa. The CTR includes default translators; however, site-specific conditions, such as water temperature, pH, suspended solids, and organic carbon affect the form of metal (dissolved, non-filterable, or otherwise) present in the water and therefore available to cause toxicity. In general, the dissolved form of the metal is more available and more toxic to aquatic life than non-filterable forms. Site-specific translators can be developed

to account for site-specific conditions, thereby preventing exceedingly stringent or under protective water quality objectives.

This Order covers discharges to various receiving waters; therefore, site-specific conditions vary. CTR default translators were used for all metals, except for copper and nickel within the context of San Francisco Bay. The Suisun Bay, San Pablo Bay, Central San Francisco Bay, and Lower San Francisco Bay translators specified in Basin Plan Table 7.2.1-2 were used for copper. The South San Francisco Bay translators specified in Basin Plan Table 7.2.1-1 were used for copper and nickel. The North and Central San Francisco Bay translators for nickel recommended by the Clean Estuary Partnership's *North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators (2005)* were used for Suisun Bay, San Pablo Bay, Central San Francisco Bay, and Lower San Francisco Bay.

Table F-3. Copper and Nickel Translators

San Francisco Bay Segment	Copper		Nickel	
	AMEL Translator	MDEL Translator	AMEL Translator	MDEL Translator
Suisun Bay and San Pablo Bay	0.38	0.66	0.27	0.57
Central and Lower San Francisco Bays	0.73	0.87	0.65	0.85
South San Francisco Bay	0.53	0.53	0.44	0.44

3. Need for WQBELs

a. Methodology. SIP section 1.3 sets forth the methodology used for priority pollutants to assess whether they have reasonable potential to exceed water quality objectives. In this Order, this methodology is also applied to non-priority pollutants as guidance in determining reasonable potential. The analysis begins with identifying the maximum effluent concentration (MEC) observed for each pollutant based on available effluent concentration data and the ambient background concentration (B). SIP section 1.4.3 states that ambient background concentrations are either the maximum ambient concentration observed or, for water quality objectives intended to protect human health, the arithmetic mean of observed concentrations. There are three triggers in determining reasonable potential:

i. **Trigger 1** is activated if the maximum effluent concentration is greater than or equal to the lowest applicable water quality criterion (MEC $\geq$ water quality criterion).

ii. **Trigger 2** is activated if the ambient background concentration observed in the receiving water is greater than the water quality criterion (B > water quality criterion) *and* the pollutant is detected in any effluent sample.

iii. **Trigger 3** is activated if a review of other information indicates that a WQBEL is needed to protect beneficial uses.

b. Effluent Data. Effluent data collected from 12 facilities enrolled under the previous order during 2012 through 2016 were used to characterize discharges and determine whether they have reasonable potential to cause or contribute to an exceedance of water

quality criteria. Effluent data for Category 1 discharges are unavailable because no such Dischargers enrolled in the previous order.

c. **Ambient Background Data.** The SIP states that, when calculating WQBELs, ambient background concentrations are to be either the observed maximum ambient water column concentrations or, for water quality objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations. Because the receiving waters for discharges from the facilities covered under this permit are varied, and because receiving waters are not expected to contain significant concentrations of pollutants related to these discharges, receiving water background concentrations were not considered for this analysis, with one exception. This Order accounts for ambient selenium concentrations in the Guadalupe River as measured and reported by the Santa Clara Valley Urban Runoff Pollution Prevention Program in 2013.

d. **Reasonable Potential Analyses.** Monitoring data were unavailable for Category 1 discharges because no Dischargers under this category were enrolled during term of the previous order. Nevertheless, aquifer well discharges are assumed to not contain pollutants above water quality objectives because they originate in the vicinity of drinking water supply aquifers that are not expected to be contaminated; therefore, there is no reasonable potential for these discharges to cause or contribute to exceedances of water quality objectives.

Reasonable potential analyses were conducted for Category 2 and Category 3 discharges. The MECs for detected parameters and most stringent applicable water quality criteria are presented in the following tables, along with the analysis results (yes or no) for each pollutant. Reasonable potential was not determined for all pollutants and monitoring data are unavailable for others. When additional data become available, further analysis will be conducted to determine whether WQBELs are necessary.

Based on a review of the effluent data, reasonable potential was found for turbidity, chloride, and total dissolved solids from Category 2 discharges and for copper, nickel, and selenium from Category 3 discharges.

Table F-4. Reasonable Potential Analysis – Category 2 Discharges

CTR No.	Pollutant [1]	Unit	Governing Criteria	MEC or Minimum DL [1,2]	Result [3]
1	Antimony	µg/L	6.0	0.2	No
2	Arsenic	µg/L	10	7.4	No
3	Beryllium	µg/L	4.0	<0.006	No
4	Cadmium	µg/L	1.1	0.19	No
5b	Chromium (VI)	µg/L	10	0.77	No
6	Copper				
	South SF Bay Discharge	µg/L	13	1.6	No
	Central and Lower SF Bay Discharge	µg/L	8.2	1.6	No
	Suisun or San Pablo Bay Discharge	µg/L	14	1.6	No

CTR No.	Pollutant [1]	Unit	Governing Criteria	MEC or Minimum DL [1,2]	Result [3]
	Freshwater Discharge	µg/L	9.0	1.6	No
7	Lead	µg/L	3.2	0.33	No
8	Mercury	µg/L	0.050	0.0051	No
9	Nickel				
	South SF Bay Discharge	µg/L	27	3.6	No
	Central and Lower SF Bay Discharge	µg/L	13	3.6	No
	Suisun or San Pablo Bay Discharge	µg/L	30	3.6	No
	Freshwater Discharge	µg/L	52	3.6	No
10	Selenium	µg/L	5.0	2.1	No
11	Silver	µg/L	2.2	<0.0051	No
12	Thallium	µg/L	1.7	0.017	No
13	Zinc	µg/L	86	2.4	No
14	Cyanide	µg/L	2.9	1.8	No
	Turbidity	**NTU**	**5[4]**	**19**	**Yes**
	Chloride	**mg/L**	**250[4]**	**1538.8**	**Yes**
	Total Dissolved Solids	**mg/L**	**500[4]**	**4100**	**Yes**

Abbreviations:

mg/L = milligrams per liter
µg/L = micrograms per liter
NTU = nephelometric turbidity unit

Footnotes:

[1] This list includes only priority pollutants for which monitoring data were submitted to support a reasonable potential analysis and, when monitoring data are available, other pollutants for which water quality objectives exist to protect municipal supply, groundwater recharge, and agricultural supply beneficial uses.

[2] The Maximum Effluent Concentration (MEC) is the actual detected concentration unless preceded by a "<" sign, in which case the value shown is the minimum detection level (DL).

[3] Results = Yes, if MEC ≥ WQC or Trigger 3
= No, if MEC < WQC or all effluent data are undetected
= Unknown (U), if no water quality criteria are available or data are insufficient.

[4] Water quality objectives are based on secondary MCLs and apply to discharges to surface waters with existing or potential beneficial uses of "Municipal and Domestic Supply" or "Groundwater Recharge," or both.

Table F-5. Reasonable Potential Analysis – Category 3 Discharges

CTR No.	Pollutant[1]	Unit	Governing Criteria	MEC or Minimum DL [1,2]	Result [3]
1	Antimony	µg/L	6.0	1	No
2	Arsenic	µg/L	10.0	7.1	No
3	Beryllium	µg/L	4.0	<0.02	No
4	Cadmium	µg/L	1.1	0.14	No
5a	Chromium (III)	µg/L	50.0	0.47	No
6	**Copper**				
	South SF Bay Discharge	**µg/L**	**13**	**16**	**Yes**
	Central and Lower SF Bay Discharge	**µg/L**	**8.2**	**16**	**Yes**

CTR No.	Pollutant[1]	Unit	Governing Criteria	MEC or Minimum DL [1,2]	Result [3]
	Suisun or San Pablo Bay Discharge	**µg/L**	**14**	**16**	**Yes**
	Freshwater Discharge	**µg/L**	**9.0**	**16**	**Yes**
8	Mercury	µg/L	0.025	0.011	No
9	**Nickel**				
	South SF Bay Discharge	**µg/L**	**19**	**39**	**Yes**
	Central and Lower SF Bay Discharge	**µg/L**	**13**	**39**	**Yes**
	Suisun or San Pablo Bay Discharge	**µg/L**	**30**	**39**	**Yes**
	Freshwater Discharge	**µg/L**	**52**	**39**	**Yes**
10	**Selenium**	**µg/L**	**5.0**	**16**	**Yes**
11	Silver	µg/L	2.2	0.25	No
12	Thallium	µg/L	1.7	<0.02	No
13	Zinc	µg/L	86	13	No
14	Cyanide	µg/L	2.9	2.6	No
16	2,3,7,8-TCDD	µg/L	0.000000013	<0.0000012	No
17	Acrolein	µg/L	320.0	<0.62	No
18	Acrylonitrile	µg/L	0.059	<0.19	No
19	Benzene	µg/L	1.0	<0.053	No
20	Bromoform	µg/L	4.3	<0.093	No
21	Carbon Tetrachloride	µg/L	0.25	<0.11	No
22	Chlorobenzene	µg/L	680.0	<0.083	No
23	Chlorodibromomethane	µg/L	0.40	<0.075	No
24	Chloroethane	µg/L	No Criteria	<0.13	U
26	Chloroform	µg/L	No Criteria	<0.11	U
27	Dichlorobromomethane	µg/L	0.56	<0.095	No
28	1,1-Dichloroethane	µg/L	5.0	<0.072	No
29	1,2-Dichloroethane	µg/L	0.38	<0.17	No
31	1,2-Dichloropropane	µg/L	0.52	<0.12	No
32	1,3-Dichloropropylene	µg/L	0.50	<0.06	No
33	Ethylbenzene	µg/L	300.0	<0.08	No
34	Methyl Bromide	µg/L	48.0	<0.077	No
35	Methyl Chloride	µg/L	No Criteria	<0.097	U
36	Methylene Chloride	µg/L	4.7	<0.48	No
37	1,1,2,2-Tetrachloroethane	µg/L	0.17	<0.086	No
38	Tetrachloroethylene	µg/L	0.80	<0.092	No
39	Toluene	µg/L	150.0	24.9	No
40	1,2-Trans-Dichloroethylene	µg/L	10.0	<0.11	No
41	1,1,1-Trichloroethane	µg/L	200.0	<0.091	No
42	1,1,2-Trichloroethane	µg/L	0.6	<0.13	No
43	Trichloroethylene	µg/L	2.7	<0.12	No
44	Vinyl Chloride	µg/L	0.5	<0.06	No
45	2-Chlorophenol	µg/L	120.0	<0.66	No
46	2,4-Dichlorophenol	µg/L	93.0	<0.66	No
47	2,4-Dimethylphenol	µg/L	540.0	<1.2	No
48	2-Methyl-4,6-Dinitrophenol	µg/L	13.4	<0.75	No
49	2,4-Dinitrophenol	µg/L	70.0	<1.3	No
50	2-Nitrophenol	µg/L	No Criteria	<0.9	U

CTR No.	Pollutant[1]	Unit	Governing Criteria	MEC or Minimum DL [1,2]	Result [3]
51	4-Nitrophenol	µg/L	No Criteria	<0.99	U
52	3-Methyl-4-Chlorophenol	µg/L	No Criteria	<0.58	U
53	Pentachlorophenol	µg/L	0.28	<1.4	No
54	Phenol	µg/L	21000.0	<0.46	No
55	2,4,6-Trichlorophenol	µg/L	2.1	<0.74	No
56	Acenaphthene	µg/L	1200.0	<0.57	No
57	Acenaphthylene	µg/L	No Criteria	<0.19	U
58	Anthracene	µg/L	9,600.0	<0.19	No
59	Benzidine	µg/L	0.00012	<3.4	No
60	Benzo(a)Anthracene	µg/L	0.0044	<0.19	No
61	Benzo(a)Pyrene	µg/L	0.0044	<0.19	No
62	Benzo(b)Fluoranthene	µg/L	0.0044	<0.19	No
63	Benzo(ghi)Perylene	µg/L	No Criteria	<0.19	U
64	Benzo(k)Fluoranthene	µg/L	0.0044	<0.19	No
65	Bis(2-Chloroethoxy)Methane	µg/L	No Criteria	<0.81	U
66	Bis(2-Chloroethyl)Ether	µg/L	0.031	<0.14	No
67	Bis(2-Chloroisopropyl)Ether	µg/L	1400.0	<0.41	No
68	Bis(2-Ethylhexyl)Phthalate	µg/L	1.8	24	U[4]
69	4-Bromophenyl Phenyl Ether	µg/L	No Criteria	<0.43	U
70	Butylbenzyl Phthalate	µg/L	3000.0	<0.64	No
71	2-Chloronaphthalene	µg/L	1700.0	<0.57	No
72	4-Chlorophenyl Phenyl Ether	µg/L	No Criteria	<0.93	U
73	Chrysene	µg/L	0.0044	<0.19	No
74	Dibenzo(a,h)Anthracene	µg/L	0.0044	<0.19	No
75	1,2-Dichlorobenzene	µg/L	600	<0.099	No
76	1,3-Dichlorobenzene	µg/L	400	<0.069	No
77	1,4-Dichlorobenzene	µg/L	5.0	<0.11	No
78	3,3-Dichlorobenzidine	µg/L	0.040	<2	No
79	Diethyl Phthalate	µg/L	23000	<0.86	No
80	Dimethyl Phthalate	µg/L	313000	<0.68	No
81	Di-n-Butyl Phthalate	µg/L	2700	<0.91	No
82	2,4-Dinitrotoluene	µg/L	0.11	<0.68	No
83	2,6-Dinitrotoluene	µg/L	No Criteria	<0.54	U
84	Di-n-Octyl Phthalate	µg/L	No Criteria	<0.65	U
85	1,2-Diphenylhydrazine	µg/L	0.040	<0.33	No
86	Fluoranthene	µg/L	300	<0.76	No
87	Fluorene	µg/L	1300	<0.19	No
88	Hexachlorobenzene	µg/L	0.00075	<0.89	No
89	Hexachlorobutadiene	µg/L	0.44	<0.12	No
90	Hexachlorocyclopentadiene	µg/L	50.0	<0.45	No
91	Hexachloroethane	µg/L	1.9	<0.082	No
92	Indeno(1,2,3-cd) Pyrene	µg/L	0.0044	<0.19	No
93	Isophorone	µg/L	8.4	<0.81	No
94	Naphthalene	µg/L	No Criteria	<0.14	U
95	Nitrobenzene	µg/L	17	<0.74	No
96	N-Nitrosodimethylamine	µg/L	0.00069	<1.1	No
97	N-Nitrosodi-n-Propylamine	µg/L	0.0050	<0.85	No
98	N-Nitrosodiphenylamine	µg/L	5.0	<0.9	No

CTR No.	Pollutant[1]	Unit	Governing Criteria	MEC or Minimum DL [1,2]	Result [3]
99	Phenanthrene	µg/L	No Criteria	<0.19	U
100	Pyrene	µg/L	960	<0.19	No
101	1,2,4-Trichlorobenzene	µg/L	5.0	<0.2	No
102	Aldrin	µg/L	0.00013	<0.008	No
103	alpha-BHC	µg/L	0.0039	<0.007	No
104	beta-BHC	µg/L	0.014	<0.02	No
105	gamma-BHC (Lindane)	µg/L	0.019	<0.008	No
106	delta-BHC	µg/L	No Criteria	<0.02	U
107	Chlordane	µg/L	0.00057	<0.04	No
108	4,4-DDT	µg/L	0.00059	<0.02	No
109	4,4-DDE	µg/L	0.00059	<0.02	No
110	4,4-DDD	µg/L	0.00083	<0.02	No
111	Dieldrin	µg/L	0.00014	<0.009	No
112	alpha-Endosulfan	µg/L	0.0087	<0.01	No
113	beta-Endosulfan	µg/L	0.0087	<0.02	No
114	Endosulfan Sulfate	µg/L	110	<0.02	No
115	Endrin	µg/L	0.0023	<0.009	No
116	Endrin Aldehyde	µg/L	0.76	<0.02	No
117	Heptachlor	µg/L	0.00021	<0.02	No
118	Heptachlor Epoxide	µg/L	0.00010	<0.02	No
119-125	PCBs sum	µg/L	0.00017	<0.04	No
126	Toxaphene	µg/L	0.0002	<0.4	No
	Turbidity	NTU	5	--	U

Abbreviations:

µg/L= micrograms per liter
NTU = nephelometric turbidity unit

Footnotes:

[1] This list contains the CTR priority pollutants and, when data are available, other pollutants for which water quality objectives exist to protect municipal supply, groundwater recharge, and agricultural supply beneficial uses.

[2] The Maximum Effluent Concentration (MEC) is the actual detected concentration unless preceded by a "<" sign, in which case the value shown is the minimum detection level (DL).

[3] Results = Yes, if MEC ≥ WQC or Trigger 3
= No, if MEC < WQC or all effluent data are undetected
= Unknown (U), if no water quality criteria are available or data are insufficient.

[4] Effluent data indicates exceedances of water quality criteria for bis(2-ethylhexyl)phthalate. However bis(2-ethylhexyl)phthalate is a common laboratory contaminant and is not anticipated to be a pollutant of concern for the type of effluent this Order allows. This Order requires sampling for bis(2-ethylhexyl)phthalate using ultra clean sampling techniques for re-evaluation during future permit reissuance.

e. **Toxicity.** This Order contains acute toxicity WQBELs because Basin Plan section 4.5.5.3.1 and Table 4-3 require them. This Order does not contain chronic toxicity WQBELs because no evidence suggests that the types of groundwater discharges covered by this Order have a reasonable potential to cause chronic toxicity in receiving waters.

f. **Sediment Quality.** Pollutants in some receiving water sediments may be present in quantities that alone or in combination are toxic to benthic communities. Efforts are underway to identify stressors causing such conditions. However, to date there is no evidence directly linking compromised sediment conditions to the discharges subject to this Order; therefore the Regional Water Board cannot draw a conclusion about

Reasonable Potential for the discharges to cause or contribute to exceedances of the sediment quality objectives. Nevertheless, the Regional Monitoring Program continues to monitor San Francisco Bay sediment and seeks to identify stressors responsible for degraded sediment quality. Thus far, the monitoring has provided only limited information about potential stressors and sediment transport. The Regional Water Board is exploring appropriate requirements to impose on dischargers in the region, to obtain additional information that may inform future reasonable potential analyses.

4. WQBELs Calculations

The table below summarizes the WQBELs calculated based on human health criteria, aquatic life criteria, and drinking water standards (MCLs). As explained in more detail below, WQBELs were calculated for each pollutant determined to have reasonable potential to cause or contribute to an exceedance of a water quality objective. The most stringent WQBELs are shown in bold.

Table F-6. Summary of WQBELs for Category 2 Discharges

Pollutant	CTR-Human Health				CTR-Aquatic Life		MCLs	
	Discharges to Receiving Waters Used as Drinking Water		Discharges to Other Receiving Waters		Discharges to All Receiving Waters		Discharges to Receiving Waters Used as Drinking Water	
	AMEL	MDEL	AMEL	MDEL	AMEL	MDEL	AMEL	MDEL
Turbidity	---	---	---	---	---	---	5.0 NTU	10 NTU
Chloride	---	---	---	---	---	---	500 mg/L	250 mg/L
Total Dissolved Solids	---	---	---	---	---	---	1,010 mg/L	500 mg/L

Abbreviations:
mg/L= milligrams per liter
NTU = nephelometric turbidity unit

Table F-7. Summary of WQBELs for Category 3 Discharges

Pollutant	CTR-Human Health				CTR-Aquatic Life		MCLs	
	Discharges to Receiving Waters Used as Drinking Water		Discharges to Other Receiving Waters		Discharges to All Receiving Waters		Discharges to Receiving Waters Used as Drinking Water	
	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)
Copper, Total Recoverable								
South SF Bay	1,300	2,600	---	---	**10**	**20**	1,300	2,600
Central or Lower SF Bay	1,300	2,600	---	---	**5.4**	**11**	1,300	2,600
Suisun or San Pablo Bay	1,300	2,600	---	---	**7.1**	**14**	1,300	2,600
Freshwater	1,300	2,600	---	---	**7.0**	**14**	1,300	2,600
Nickel, Total Recoverable								

Pollutant	CTR-Human Health				CTR-Aquatic Life		MCLs	
	Discharges to Receiving Waters Used as Drinking Water		Discharges to Other Receiving Waters		Discharges to All Receiving Waters		Discharges to Receiving Waters Used as Drinking Water	
	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)
South SF Bay	610	1,200	4,600	9,200	**22**	**44**	100	200
Central or Lower SF Bay	610	1,200	4,600	9,200	**10**	**21**	100	200
Suisun or San Pablo Bay	610	1,200	4,600	9,200	**25**	**50**	100	200
Freshwater	610	1,200	4,600	9,200	**43**	**86**	100	200
Selenium, Total Recoverable[1]	---	---	---	---	**4.1**	**8.2**	50	100
Selenium, Total Recoverable[2]	---	---	---	---	**21**	**27**	50	100

Abbreviation:

µg/L = micrograms per liter

Footnote:

[1] These limits do not apply to Santa Clara University's discharge from 2505 The Alameda, Santa Clara.
[2] These limits apply only to Santa Clara University's discharge from 2505 The Alameda, Santa Clara.

a. **Mixing Zones and Dilution.** This Order authorizes discharges to many types of receiving waters, including some that are likely dry during the summer months. In most instances, it does not establish any mixing zones; therefore, the WQBELs are calculated without accounting for any dilution credits. However, this Order grants a selenium mixing zone and dilution credit for Santa Clara University's discharge to the Guadalupe River from 2505 The Alameda in Santa Clara (37°22'41"N, 121°56'11"W). The Guadalupe River has adequate capacity to assimilate selenium at that location, and the Regional Water Board has not granted a selenium mixing zone for any other discharge within this reach of the Guadalupe River. Moreover, the selenium mixing zone will meet all the conditions listed in SIP section 1.4.2.2.

Santa Clara University's discharge mixes completely with Guadalupe River water. SIP section 1.4.2.1 specifies how to calculate dilution credits for completely mixed discharges. For chronic aquatic life objectives, the SIP allows a dilution credit calculated by dividing the 7Q10 river flow (the average low flow that occurs for seven consecutive days with a statistical frequency of once every 10 years) by the four-day average daily maximum discharge flow. The 7Q10 Guadalupe River flow is 8.27 cubic feet per second (cfs) based on U.S. Geological Survey (USGS) data collected from April 1, 2003, through March 31, 2017, at a monitoring station near Highway 101 in San Jose, about 2,000 feet upstream of the discharge (the 7Q10 flow was calculated using USGS SW Toolbox, version 1.0.2). Santa Clara University's four-day average daily maximum discharge flow is assumed to be as high as the maximum design capacity of its groundwater extraction system (0.134 cfs). The SIP, therefore, allows a maximum dilution credit (D) of 62.

To preserve some assimilative capacity for selenium from other possible discharges to this reach of the Guadalupe River, this Order restricts the selenium dilution credit for Santa Clara University's discharge to 10. This is the smallest dilution credit that results in selenium WQBELs with which Santa Clara University can readily comply. These WQBELs are based on the highest selenium concentration Santa Clara University is expected to discharge, about 21 µg/l. Santa Clara University has sampled for selenium seven times, and the highest concentration found was 16 µg/l. To account for the relatively small sample size, the highest measured concentration was multiplied by 1.3 to estimate the likely 95th percentile concentration with 95 percent confidence (based on a coefficient of variation of 0.2) as explained in section 3.3.2 (see Table 3-2) of the *Technical Support Document for Water Quality-Based Toxics Control* (U.S. EPA, March 1991).

b. **WQBELs Based on Human Health Criteria.** WQBELs based on CTR human health criteria are calculated in accordance with SIP section 1.4. The average monthly effluent limitations (AMELs) are set equal to the criteria. The maximum daily effluent limitations (MDELs) are calculated by multiplying the AMEL by an MDEL/AMEL multiplier of 2.01, which is derived from a default effluent data coefficient of variation (CV) of 0.60.

c. **WQBELs Based on Aquatic Life Criteria.** WQBELs based on Basin Plan and CTR aquatic life criteria are calculated in accordance with SIP section 1.4 with a default coefficient of variation of 0.6. For Santa Clara University, a coefficient of variation of 0.2 was used to calculate selenium WQBELs based on available monitoring data.

Table F-8. Aquatic Life-Based WQBELs for Category 3 Discharges—Copper

Pollutant	Copper	Copper	Copper	Copper
Units	µg/L	µg/L	µg/L	µg/L
Basis and criteria type	CTR aquatic life (freshwater)	Basin Plan SSO Lower or South SF Bay	Basin Plan SSO Central SF Bay	Basin Plan SSO Suisun or San Pablo Bay
Criteria –Acute	14	-----	-----	-----
Criteria –Chronic	9.0	-----	-----	-----
SSO Criteria – Acute	-----	10.8	9.4	9.4
SSO Criteria – Chronic	-----	6.9	6.0	6.0
Site Specific Translator – MDEL	-----	0.53	0.87	0.66
Site Specific Translator - AMEL	-----	0.53	0.73	0.38
No. of samples per month	4	4	4	4
ECA acute	14	20	11	14
ECA chronic	9.3	13	8.2	16
CV (selected)	0.6	0.6	0.6	0.6
ECA acute mult99	0.32	0.32	0.32	0.32
ECA chronic mult99	0.53	0.53	0.53	0.53
LTA acute	4.5	6.5	3.5	4.6
LTA chronic	4.9	6.9	4.3	8.3
minimum of LTAs	4.5	6.5	3.5	4.6
AMEL mult95	1.6	1.6	1.6	1.6
MDEL mult99	3.1	3.1	3.1	3.1
AMEL (aq life)	7.0	10	5.4	7.1
MDEL(aq life)	14	20	11	14

Pollutant	Copper	Copper	Copper	Copper
Units	µg/L	µg/L	µg/L	µg/L
MDEL/AMEL Multiplier	2.01	2.01	2.01	2.01
AMEL (human hlth)	1,300	1,300	1,300	1,300
MDEL (human hlth)	2,608	2,613	2,613	2,613
minimum of AMEL for Aq. life vs HH	7.0	10	5.4	7.1
Final limit - AMEL	7.0	10	5.4	7.1
Final limit - MDEL	14	20	11	14

Abbreviation:
µg/L = micrograms per liter

Table F-9. Aquatic Life-Based WQBELs for Category 3 Discharges—Nickel

Pollutant	Nickel	Nickel	Nickel	Nickel
Units	µg/L	µg/L	µg/L	µg/L
Basis and criteria type	CTR aquatic life (freshwater)	Basin Plan SSO Lower or South SF Bay	Basin Plan SSO Central SF Bay	Basin Plan SSO Suisun or San Pablo Bay
Criteria –Acute	470	-----	74	74
Criteria –Chronic	52	-----	8.2	8.2
SSO Criteria – Acute	-----	62	-----	-----
SSO Criteria – Chronic	-----	12	-----	-----
Site Specific Translator – MDEL	-----	0.44	0.85	0.57
Site Specific Translator - AMEL	-----	0.44	0.65	0.27
No. of samples per month	4	4	4	4
ECA acute	470	142	87	130
ECA chronic	52	27	13	30
CV (selected)	0.6	0.6	0.6	0.6
ECA acute mult99	0.32	0.32	0.32	0.32
ECA chronic mult99	0.53	0.53	0.53	0.53
LTA acute	151	46	28	24
LTA chronic	28	14	6.7	16
minimum of LTAs	28	14	6.7	16
AMEL mult95	1.6	1.6	1.6	1.6
MDEL mult99	3.1	3.1	3.1	3.1
AMEL (aq life)	43	22	10	25
MDEL(aq life)	86	44	21	50
MDEL/AMEL Multiplier	2.01	2.01	2.01	2.01
AMEL (human hlth)	610	610	610	610
MDEL (human hlth)	1,200	1,200	1,200	1,200
minimum of AMEL for Aq. life vs HH	43	22	10	25
Final limit - AMEL	43	22	10	25
Final limit - MDEL	86	44	21	50

Abbreviation:
µg/L = micrograms per liter

Table F-10. Aquatic Life-Based WQBELs for Category 3 Discharges—Selenium

Pollutant	Selenium[1]	Selenium[2]
Units	µg/L	µg/L
Criteria –Acute	20	20

Pollutant	Selenium[1]	Selenium[2]
Units	µg/L	µg/L
Criteria –Chronic	5	5
Dilution Factor	0	10
No. of samples per month	4	4
Maximum Background Concentration in Receiving Water	3.3	3.3
ECA acute	20	187
ECA chronic	5	22
CV (selected)	0.6	0.2
ECA acute mult99	0.32	0.64
ECA chronic mult99	0.53	0.8
LTA acute	6.4	120
LTA chronic	2.6	18
minimum of LTAs	2.6	18
AMEL mult95	1.6	1.2
MDEL mult99	3.1	1.6
AMEL (aq life)	4.1	21
MDEL(aq life)	8.2	27
MDEL/AMEL Multiplier	2.01	1.3
AMEL (human hlth)	-----	-----
MDEL (human hlth)	-----	-----
minimum of AMEL for Aq. life vs HH	4.1	21
Final limit - AMEL	4.1	21
Final limit - MDEL	8.2	27

Abbreviation:

µg/L = micrograms per liter

Footnote:

[1] These limits do not apply to Santa Clara University's discharge from 2505 The Alameda, Santa Clara.
[2] These limits apply only to Santa Clara University's discharge from 2505 The Alameda, Santa Clara.

d. **WQBELs Based on MCLs.** WQBELs for pollutants that demonstrate reasonable potential based on the MCLs listed in the California Code of Regulations, title 22, sections 64431, 64444, and 64449 are calculated using SIP section 1.4 as guidance. These limits apply to discharges to waters with the MUN or GWR designations. The AMELs are set equal to the MCLs. The MDELs are calculated by multiplying the AMEL by an MDEL/AMEL multiplier of 2.01, which is derived from a default effluent data CV of 0.60.

e. **Acute Toxicity WQBELs.** The acute toxicity WQBELs are based on Basin Plan Table 4-3 (continuous discharge/quarterly or annual tests).

D. Discharge Requirement Considerations

1. **Anti-backsliding.** This Order complies with the anti-backsliding provisions of CWA sections 402(o) and 303(d)(4) and 40 C.F.R. section 122.44(l), which generally require effluent limitations in a reissued permit to be as stringent as those in the previous permit. The requirements of this Order are at least as stringent as those in the previous order.

2. **Antidegradation**. This Order is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. It continues the status quo with respect to the discharges authorized in the previous order. It does not allow for a reduced level of treatment or less stringent effluent limitations. It holds Dischargers to the same performance or better. Moreover, the number of Dischargers enrolled under this Order is unlikely to change significantly.

3. **Stringency of Requirements for Individual Pollutants**. This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. Its technology-based requirements implement minimum applicable federal technology-based requirements. In addition, this Order contains more stringent effluent limitations as necessary to meet water quality standards. Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement CWA requirements.

   This Order's WQBELs have been derived to implement water quality objectives that protect beneficial uses. The beneficial uses and water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating these WQBELs are based on the CTR, as implemented in accordance with the SIP, which U.S. EPA approved on May 18, 2000. U.S. EPA approved most Basin Plan beneficial uses and water quality objectives prior to May 30, 2000. Beneficial uses and water quality objectives submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. section 131.21(c)(1). U.S. EPA approved the remaining beneficial uses and water quality objectives so they are applicable water quality standards pursuant to 40 C.F.R. section 131.21(c)(2).

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

The receiving water limits are based on the water quality objectives listed in Basin Plan chapter 3 and are intended to ensure that receiving waters meet water quality standards in accordance with the CWA and regulations adopted thereunder.

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

Attachment D contains standard provisions that apply to all NPDES permits in accordance with 40 C.F.R. section 122.41 and additional conditions applicable to specific categories of permits in accordance with 40 C.F.R. section 122.42. Dischargers must comply with these provisions. The conditions set forth in 40 C.F.R. sections 122.41(a)(1) and (b) through (n) apply to all state-issued NPDES permits and must be incorporated into the permits either expressly or by reference.

In accordance with 40 C.F.R. section 123.25(a)(12), states may omit or modify conditions to impose more stringent requirements. This Order contains provisions that supplement the federal standard provisions in Attachment D. This Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the State's

enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates Water Code section 13387(e) by reference.

B. Monitoring and Reporting Provisions

CWA section 308 and 40 C.F.R. sections 122.41(h), 122.41(j)-(l), 122.44(i), and 122.48 require that NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP) in Attachment E establishes monitoring, reporting, and recordkeeping requirements that implement federal and State requirements. For more information regarding these requirements, see Fact Sheet section VII.

Pursuant to Water Code section 13267, the Executive Officer may specify additional effluent and ambient monitoring requirements in individual Authorizations to Discharge, such as, but not limited to, the following:

1. Monitoring in response to a complaint,
2. Stormwater monitoring,
3. Additional discharge observations, and
4. Additional priority pollutant scans.

The Executive Officer is most likely to specify additional monitoring requirements for Dischargers with flows greater than 10 gallons per minute.

C. Special Provisions

1. Reopener Provisions

These provisions are based on 40 C.F.R. sections 122.62 and 122.63 and allow modification of this Order and its effluent limitations as necessary in response to updated water quality objectives, regulations, or other new and relevant information that may become available in the future, and other circumstances as allowed by law.

2. Application for General Permit Coverage and Authorization to Discharge

Based on 40 C.F.R. section 122.28(b), this provision requires each Discharger to submit an NOI form and, upon receiving an Authorization to Discharge from the Executive Officer, comply with this Order. Pursuant to 40 C.F.R. section 122.28(b)(3), it also authorizes the Executive Officer to terminate any Authorization to Discharge or require a Discharger to apply for an individual permit.

3. Water Reclamation Specifications

Water reclamation specifications are based on Water Code section 13050 and are intended to ensure that reclamation of treated groundwater does not threaten the quality of waters of the

State or create nuisance conditions. In accordance with Regional Water Board Resolution No. 88-160, reclamation of treated groundwater is a preferred method of disposal.

4. **Construction, Operation, and Maintenance Specifications**

   a. **Wastewater Facilities Review and Evaluation, and Status Reports.** This provision is necessary to ensure adequate and reliable treatment and disposal of all wastewater and is based on 40 C.F.R. section 122.41(e).

   b. **Operations and Maintenance Manual Review and Status Reports.** This provision is necessary to ensure that operations and maintenance procedures are in place that are useful and relevant to current equipment and operational practices. It is based on 40 C.F.R. section 122.41(e).

5. **No Preemption**

   This Order permits the discharge of treated groundwater to waters of the State subject to the prohibitions, effluent limitations, receiving water limitations, and provisions of this Order. This provision clarifies that the Order does not preempt or supersede the authority of municipalities, flood control agencies, or other agencies to prohibit, restrict, or control discharges to storm drain systems or other watercourses subject to their jurisdiction. For example, this Order provides no water or groundwater rights and does not preempt the authority of any local or State agency as it relates to water rights.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The MRP is a standard requirement in all NPDES permits issued by the Regional Water Board, including this Order. It specifies sampling stations, pollutants to be monitored (including parameters for which effluent limitations are specified), monitoring frequencies, and additional reporting requirements. The principal purposes of a monitoring program are to document compliance with WDRs and prohibitions established by the Regional Water Board; to facilitate self-policing by Dischargers in the prevention and abatement of pollution arising from waste discharges; to develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards; and to prepare water and wastewater quality inventories.

The following provides the rationale for the monitoring and reporting requirements contained in the MRP for the facilities covered under this Order:

A. **Influent Monitoring.** No influent monitoring is required for Category 1 and 2 discharges. For Category 3 discharges, influent monitoring is necessary to establish that pollutant loadings are below the levels for which the treatment systems were designed and to provide a warning if one or more new pollutants are being extracted that the treatment system may not be designed to remove.

B. **Effluent Monitoring.** Effluent monitoring is necessary to evaluate compliance with the Order's prohibitions and effluent limitations and to inform the next permit reissuance. The previous order required monitoring for non-limited parameters, such as metals. Monitoring requirements for these pollutants have been updated to ensure compliance with this Order's effluent limitations.

C. **Reclamation Monitoring Requirements.** Reclaimed water monitoring is necessary to evaluate compliance with the Order's effluent limitations.

D. **Receiving Water Monitoring.** Receiving water monitoring is necessary to characterize the effects that discharges could have on receiving waters and, in some cases, to evaluate compliance with receiving water limits. Freshwater monitoring is also necessary to calculate some water quality objectives.

E. **Other Monitoring Requirements.** Additional monitoring is necessary to ensure correct use of chemicals (e.g., coagulants) in accordance to the Authorization to Discharge and guidance documents and to address performance-related issues in treatments systems and their effects on reclaimed water and receiving water not captured through monitoring analytical methods.

VIII. PUBLIC PARTICIPATION

The Regional Water Board considered the issuance of WDRs that will serve as an NPDES permit for groundwater treatment facilities in the San Francisco Bay Region. As a step in the WDRs adoption process, the Regional Water Board developed tentative WDRs and encouraged public participation in the WDRs adoption process.

A. **Notification of Interested Parties.** The Regional Water Board notified Dischargers and interested agencies and persons of its intent to prescribe WDRs and provided an opportunity to submit written comments and recommendations. Notice of the Regional Water Board's intent to adopt these WDRs was also provided through *The Mercury News* in San Jose. The public had access to the agenda and any changes in dates and locations through the Regional Water Board website at www.waterboards.ca.gov/sanfranciscobay.

B. **Written Comments.** Interested persons were invited to submit written comments concerning the tentative WDRs as explained through the notification process. Comments were due either in person or by mail at the Regional Water Board office at 1515 Clay Street, Suite 1400, Oakland, California 94612, to the attention of Marcos De la Cruz.

For full staff response and Regional Water Board consideration, the written comments were due at the Regional Water Board office by 5:00 p.m. on April 28, 2018.

C. **Public Hearing.** The Regional Water Board held a public hearing on the tentative WDRs during its regular meeting at the following date and time, and at the following location:

Date:	Wednesday, June 13, 2018
Time:	9:00 a.m.
Location:	Elihu Harris State Office Building 1515 Clay Street, 1st Floor Auditorium Oakland, CA 94612
Contact:	Marcos De la Cruz, (510) 622-2365, marcos.delacruz@waterboards.ca.gov

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharges, WDRs, and permit. For accuracy of the record, important testimony was requested to be in writing.

Dates and venues change. The Regional Water Board web address is www.waterboards.ca.gov/sanfranciscobay, where one could access the current agenda for changes in dates and locations.

D. **Reconsideration of Waste Discharge Requirements.** Any aggrieved person may petition the State Water Board to review the Regional Water Board decision regarding the final WDRs. The State Water Board must receive the petition at the following address within 30 calendar days of the Regional Water Board action:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

For instructions on how to file a petition for review, see www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml.

E. **Information and Copying.** Supporting documents and comments received are on file and may be inspected at the address above at any time between 9:00 a.m. and 5:00 p.m., Monday through Friday. Copying of documents may be arranged by calling (510) 622-2300.

F. **Register of Interested Persons.** Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference the general permit, and provide a name, address, and phone number.

G. **Additional Information.** Requests for additional information or questions regarding this Order should be directed to Marcos De la Cruz at (510) 622-2365 or Marcos.Delacruz@waterboards.ca.gov.

ATTACHMENT G– MINIMUM LEVELS

List of Monitoring Parameters and Analytical Methods

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
1.	Antimony	204.2					10	5	50	0.5	5	0.5		1000
2.	Arsenic	206.3				20		2	10	2	2	1		1000
3.	Beryllium						20	0.5	2	0.5	1			1000
4.	Cadmium	200 or 213					10	0.5	10	0.25	0.5			1000
5a.	Chromium (III)	SM 3500												
5b.	Chromium (VI)	SM 3500				10	5							1000
	Chromium (total)[3]	SM 3500					50	2	10	0.5	1			1000
6.	Copper	200.9					25	5	10	0.5	2			1000
7.	Lead	200.9					20	5	5	0.5	2			10,000
8.	Mercury	1631 (note)[4]												
9.	Nickel	249.2					50	5	20	1	5			1000
10.	Selenium	200.8 or SM 3114B or C						5	10	2	5	1		1000
11.	Silver	272.2					10	1	10	0.25	2			1000
12.	Thallium	279.2					10	2	10	1	5			1000
13.	Zinc	200 or 289					20		20	1	10			
14.	Cyanide	SM 4500 CN^- C or I				5								
15.	Asbestos (only required for discharges to MUN waters)[5]	0100.2 [6]												
16.	2,3,7,8-TCDD and 17 congeners (Dioxin)	1613												
17.	Acrolein	603	2.0	5										
18.	Acrylonitrile	603	2.0	2										
19.	Benzene	602	0.5	2										
33.	Ethylbenzene	602	0.5	2										
39.	Toluene	602	0.5	2										
20.	Bromoform	601	0.5	2										
21.	Carbon Tetrachloride	601	0.5	2										

[1] The suggested method is the U.S. EPA Method unless otherwise specified (SM = Standard Methods). The Discharger may use an equivalent test method if that method is more sensitive that those specified in 40 C.F.R. § 136 and is specified in this Order or the Discharger's Authorization to Discharge.

[2] Minimum levels are from the *State Implementation Policy*. They are the concentration of the lowest calibration standard for that technique based on a survey of contract laboratories. Laboratory techniques are defined as follows: GC = Gas Chromatography; GCMS = Gas Chromatography/Mass Spectrometry; LC = High Pressure Liquid Chromatography; Color = Colorimetric; FAA = Flame Atomic Absorption; GFAA = Graphite Furnace Atomic Absorption; ICP = Inductively Coupled Plasma; ICPMS = Inductively Coupled Plasma/Mass Spectrometry; SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e., U.S. EPA 200.9); Hydride = Gaseous Hydride Atomic Absorption; CVAA = Cold Vapor Atomic Absorption; DCP = Direct Current Plasma.

[3] Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 ug/l).

[4] The Discharger shall use ultra-clean sampling (U.S. EPA Method 1669) and ultra-clean analytical methods (U.S. EPA Method 1631) for mercury monitoring. The minimum level for mercury is 2 ng/l (or 0.002 ug/l).

[5] MUN = Municipal and Domestic Supply. This designation, if applicable, is in the Findings of the permit.

[6] Determination of Asbestos Structures over 10 [micrometers] in Length in Drinking Water Using MCE Filters, U.S. EPA 600/R-94-134, June 1994.

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
22.	Chlorobenzene	601	0.5	2										
23.	Chlorodibromomethane	601	0.5	2										
24.	Chloroethane	601	0.5	2										
25.	2-Chloroethylvinyl Ether	601	1	1										
26.	Chloroform	601	0.5	2										
75.	1,2-Dichlorobenzene	601	0.5	2										
76.	1,3-Dichlorobenzene	601	0.5	2										
77.	1,4-Dichlorobenzene	601	0.5	2										
27.	Dichlorobromomethane	601	0.5	2										
28.	1,1-Dichloroethane	601	0.5	1										
29.	1,2-Dichloroethane	601	0.5	2										
30.	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5	2										
31.	1,2-Dichloropropane	601	0.5	1										
32.	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5	2										
34.	Methyl Bromide or Bromomethane	601	1.0	2										
35.	Methyl Chloride or Chloromethane	601	0.5	2										
36.	Methylene Chloride or Dichlorormethane	601	0.5	2										
37.	1,1,2,2-Tetrachloroethane	601	0.5	1										
38.	Tetrachloroethylene	601	0.5	2										
40.	1,2-Trans-Dichloroethylene	601	0.5	1										
41.	1,1,1-Trichloroethane	601	0.5	2										
42.	1,1,2-Trichloroethane	601	0.5	2										
43.	Trichloroethene	601	0.5	2										
44.	Vinyl Chloride	601	0.5	2										
45.	2-Chlorophenol	604	2	5										
46.	2,4-Dichlorophenol	604	1	5										
47.	2,4-Dimethylphenol	604	1	2										
48.	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	5										
49.	2,4-Dinitrophenol	604	5	5										
50.	2-Nitrophenol	604		10										
51.	4-Nitrophenol	604	5	10										
52.	3-Methyl-4-Chlorophenol	604	5	1										
53.	Pentachlorophenol	604	1	5										
54.	Phenol	604	1	1		50								
55.	2,4,6-Trichlorophenol	604	10	10										
56.	Acenaphthene	610 HPLC	1	1	0.5									
57.	Acenaphthylene	610 HPLC		10	0.2									
58.	Anthracene	610 HPLC		10	2									
60.	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	10	5										
61.	Benzo(a)Pyrene	610 HPLC		10	2									
62.	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC		10	10									
63.	Benzo(ghi)Perylene	610 HPLC		5	0.1									
64.	Benzo(k)Fluoranthene	610 HPLC		10	2									
74.	Dibenzo(a,h)Anthracene	610 HPLC		10	0.1									
86.	Fluoranthene	610 HPLC	10	1	0.05									

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
87.	Fluorene	610 HPLC		10	0.1									
92.	Indeno(1,2,3-cd) Pyrene	610 HPLC		10	0.05									
100.	Pyrene	610 HPLC		10	0.05									
68.	Bis(2-Ethylhexyl)Phthalate	606 or 625	10	5										
70.	Butylbenzyl Phthalate	606 or 625	10	10										
79.	Diethyl Phthalate	606 or 625	10	2										
80.	Dimethyl Phthalate	606 or 625	10	2										
81.	Di-n-Butyl Phthalate	606 or 625		10										
84.	Di-n-Octyl Phthalate	606 or 625		10										
59.	Benzidine	625		5										
65.	Bis(2-Chloroethoxy)Methane	625		5										
66.	Bis(2-Chloroethyl)Ether	625	10	1										
67.	Bis(2-Chloroisopropyl)Ether	625	10	2										
69.	4-Bromophenyl Phenyl Ether	625	10	5										
71.	2-Chloronaphthalene	625		10										
72.	4-Chlorophenyl Phenyl Ether	625		5										
73.	Chrysene	625		10	5									
78.	3,3'-Dichlorobenzidine	625		5										
82.	2,4-Dinitrotoluene	625	10	5										
83.	2,6-Dinitrotoluene	625		5										
85.	1,2-Diphenylhydrazine (note)[7]	625		1										
88.	Hexachlorobenzene	625	5	1										
89.	Hexachlorobutadiene	625	5	1										
90.	Hexachlorocyclopentadiene	625	5	5										
91.	Hexachloroethane	625	5	1										
93.	Isophorone	625	10	1										
94.	Naphthalene	625	10	1	0.2									
95.	Nitrobenzene	625	10	1										
96.	N-Nitrosodimethylamine	625	10	5										
97.	N-Nitrosodi-n-Propylamine	625	10	5										
98.	N-Nitrosodiphenylamine	625	10	1										
99.	Phenanthrene	625		5	0.05									
101.	1,2,4-Trichlorobenzene	625	1	5										
102.	Aldrin	608	0.005											
103.	α-BHC	608	0.01											
104.	β-BHC	608	0.005											
105.	γ-BHC (Lindane)	608	0.02											
106.	δ-BHC	608	0.005											
107.	Chlordane	608	0.1											
108.	4,4'-DDT	608	0.01											
109.	4,4'-DDE	608	0.05											
110.	4,4'-DDD	608	0.05											
111.	Dieldrin	608	0.01											
112.	Endosulfan (alpha)	608	0.02											
113.	Endosulfan (beta)	608	0.01											
114.	Endosulfan Sulfate	608	0.05											

[7] Measurement for 1,2-Diphenylhydrazine may use azobenzene as a screen: if azobenzene is measured at >1 ug/l, then the Discharger shall analyze for 1,2-Diphenylhydrazine.

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
115.	Endrin	608	0.01											
116.	Endrin Aldehyde	608	0.01											
117.	Heptachlor	608	0.01											
118.	Heptachlor Epoxide	608	0.01											
119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608	0.5											
126.	Toxaphene	608	0.5											

Appendix B
Comments

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Groundwater Hydrology

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1. Santa Clara University

April 29, 2018

Mr. Marcos De la Cruz
Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Comments on Tentative Order to Replace
Order R2-2012-0060 (Groundwater General Permit – Structural Dewatering)

CIWQS ID 788016
Santa Clara University
Bellarmine Residence Hall Groundwater Dewatering System
2505 The Alameda
Santa Clara, CA 95053

Dear Mr. De la Cruz:

The Bellarmine graduate student residence hall is located across the street from the main Santa Clara University (SCU) campus (Figure 1). The three-story, 60 unit, 33,672 square foot building was constructed in 1985 as a private motel and purchased by the University in 2001. Two shallow groundwater dewatering wells in the underground parking garage control groundwater levels beneath the floor to prevent flooding from seepage through the floor. There is no treatment system.

This dewatering system was completed and started discharging to the storm drain on February 1, 2013, in accordance with a Notice of Coverage dated November 16, 2012 (Figures 2 and 3).

A significant difference between the tentative Order and the existing Order R2-2012-0060 is effluent limitations and discharge specifications (Section IV).

Under the existing Order, effluent limitations consist of residual chlorine, pH, and acute toxicity. Discharge specifications require monitoring for compliance with a list of trigger pollutants that are not effluent limits.

The tentative Order defines three categories of discharges. The SCU discharge is a Category 3 (structural dewatering) discharge. For Category 3 discharges, effluent limitations have been expanded to include copper, nickel, and selenium.

The SCU discharge meets all effluent limits and trigger levels, with the exception of pH and selenium.

pH

Monthly pH values have been within the effluent limits of between 6.5 and 8.5 with the exception of seven values slightly below 6.5 since startup in 2013. pH values below 6.5 have occurred less frequently than four times within a six month window of time and have thus been considered minor permit violations and not subject to a fine.

Reported pH Values Below 6.5 Since Startup on 2/1/13

Sample Date	pH	Sample Date	pH
11/18/13	6.48	11/14/16	6.42
12/16/13	6.25	6/13/17	6.42
7/13/16	6.48	4/17/18	6.21
10/18/16	6.44		

The tentative Order appears to treat pH effluent limit violations more strictly, requiring confirmation sampling within 24 hours of becoming aware of the violation. If the confirmation sample also violates the effluent limit, the Discharger shall cease discharge until it has determined and corrected the cause of the violation (tentative Order, Attachment E MRP, IV.D.). Considering the past history of reported pH values, the tentative Order would be difficult to comply with. SCU cannot "cease the discharge" without flooding the underground parking garage and causing damage to the building and private vehicles.

The existing dewatering system does not have a treatment system. Therefore, the monthly variations in pH are due to changes in the groundwater over which SCU has no control and are not due to variations in a treatment system.

It is requested that the requirements of the existing Order be continued, because this allowed just enough flexibility for SCU to meet the discharge requirements.

In addition, the occasional pH value slightly below the minimum effluent limit is unlikely to occur at the discharge outfall into Guadalupe Creek for the following reasons.

The low pH of the groundwater discharge appears to be caused by a high natural concentration of dissolved carbon dioxide in the shallow groundwater. The concentration of carbon dioxide was reported at 460 mg/l from a sample of shallow groundwater on campus in 1999. Carbon dioxide partially dissolves into the water as carbonic acid, which lowers the pH. Once the water is exposed to the atmosphere, the carbon dioxide gas leaves the water to reach an equilibrium with the air. As the carbon dioxide gas is liberated, this removes the carbonic acid from the water, which raises the pH. This process should happen naturally as the discharge water flows 2.8 miles through the storm drain system to the outfall on Guadalupe Creek.

For example, a small increase in pH was gained by sampling the SCU discharge at the point where the discharge pipeline flows into a storm drain catch basin at the corner of The Alameda and Mission Street, instead of at the wellhead.

This off gassing could be verified, if necessary, by, for example, agitating the discharge sample and allowing it to stand for the amount of time equal to the transit time from SCU to the storm drain outfall or by monitoring pH at the outfall.

Selenium

Selenium concentrations have ranged from 11 to 16 ug/l. The existing trigger level is 5 ug/l and the tentative Order effluent limit will be 4.1 ug/l.

SCU April monitoring, in addition to the required pH monitoring, voluntarily included selenium analyses of the groundwater discharge and of the potable water from a hose bib. The results of these analyses reported 12 ug/l selenium in the discharge and 10 ug/l selenium in the potable water (attached Alpha Analytical lab report). The source of potable water for the site is groundwater from deep aquifer municipal wells (Figure 5). Therefore, the shallow aquifer groundwater has approximately the same concentration of selenium as the deep aquifer groundwater and drinking water for this part of the City of Santa Clara.

Selenium is a background constituent in the shallow groundwater and this groundwater has a hydraulic gradient of north-northeast towards the Guadalupe River (Figures 2 and 4). This water naturally discharges to the river and the SCU dewatering wells are merely intercepting some of this water and discharging it to the same water body via the storm drain.

Selenium is naturally occurring in the Santa Cruz Mountains to the west, which are a significant source of recharge for the Santa Clara Valley groundwater basin. For example, dewatering of the quarry pit of the LeHigh Permanente limestone quarry, just west of Cupertino, discharges approximately 300 gpm of water with selenium concentrations of 60 to 80 ug/l into Stevens Creek (Golder Associates, May 2010, Hydrologic Investigation, Lehigh Permanente Quarry). Some of this water recharges the Santa Clara Valley groundwater basin.

In the City of Santa Clara area, artesian pressure (except during droughts) causes the deep groundwater to flow upward through the regional aquitard into the shallow groundwater zone. It is this shallow groundwater that floods underground structures in the Santa Clara area and requires dewatering to prevent damage.

SCU has only two options to meet the effluent limits in the tentative Order: treatment or discharge to the sanitary sewer instead of the storm drain.

Treatment

Treatment to remove selenium to the proposed effluent limit of 4 ug/l is not feasible. Capital costs for treatment of 0.09 MGD (63 gpm) are in excess of $1,000,000 and annual operating costs are in excess of $300,000. In addition, "Very few technologies have been demonstrated at full-scale to remove selenium to less than 5 ug/l, or have been in full-scale operation for sufficient time to determine the long-term feasibility of the selenium removal technology" (CH2M-Hill, June 2010, Review of Available Technologies for the Removal of Selenium from Water). Many technologies require large areas for treatment (algal-bacterial, algal volatilization, constructed wetlands, enhanced evaporation, evaporation ponds, fluidized reactor bed). Other processes produce a selenium sludge that must be disposed of as a hazardous waste.

The SCU discharge, with a nominal selenium concentration of 15 ug/l and a maximum flow rate of 63 gpm (86,000 gpd), contains approximately 5 grams per day of selenium. Treatment to effluent limits would need to remove approximately 4 grams or one teaspoon per day of selenium.

In comparison, the San José-Santa Clara Regional Wastewater Facility (RWF) discharges an average of 0.56 ug/l of selenium per day with an average flow rate of 91 million gallons per day. This converts to 193 grams per day of selenium discharged to the Guadalupe River (the RWF outfall is immediately upstream of the SCU storm drain outfall, Figure 3).

Thus, the SCU mass discharge of selenium is very small compared to the permitted discharge of the RWF.

Sanitary Sewer Discharge

Discharge to the sanitary sewer instead of the storm drain would require a discharge permit from the City of Santa Clara instead of from the Regional Board. The cost for this discharge would be $185,000 per year ($3.75 per 100 cubic feet capacity fee, plus $282,050 annual fee per mgd) (Steven Rose, RWF and City of Santa Clara water & sewer utilities).

This cost is not feasible for this relatively small student residence hall.

In addition, the discharge of groundwater to the sanitary sewer is restricted by Section 15.14.545 (B) of the City of San Jose municipal code, which states: "A wastewater discharge permit for the discharge of ground water, subsurface drainage, surface water, roof water, or storm water shall only be issued if there is no reasonable alternative method for disposal of such water."

Summary

It will be infeasible for SCU to comply with the pH and selenium effluent limitations and discharge specifications of the tentative Order.

1. For pH, it is requested that the requirements of the existing Order be continued, because this allowed just enough flexibility for SCU to meet the discharge requirements. This will be protective of the environment because off-gassing will cause the pH to meet effluent limits by the time it reaches the storm drain outfall into Guadalupe Creek.

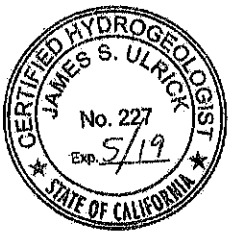
2. For selenium, it is requested that the requirements of the tentative Order be modified to allow the existing discharge. This is justified because selenium in the shallow groundwater has a natural flow toward, and discharge to, the Guadalupe River. The SCU dewatering wells are merely intercepting some of this water and discharging it to the same water body via the storm drain. The mass discharge of selenium to the Guadalupe River is the same whether or not there is a discharge from SCU.

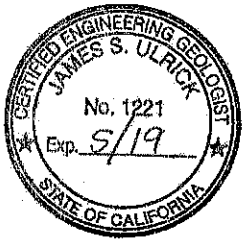
All hydrogeologic information, conclusions, and recommendations in this report have been prepared and reviewed by the undersigned California Certified Engineering Geologist.

Sincerely,

James S. Ulrick
Consulting Hydrogeologist

Professional Geologist #3834
Certified Engineering Geologist #1221
Certified Hydrogeologist #227





Attachments: References
Figure 1. Location Map
Figure 2. Storm drain pipeline to outfall at Guadalupe River
Figure 3. Aerial photo of Guadalupe River showing storm drain outfall
Figure 4. Shallow groundwater elevation contours in March 1988
Figure 5. City of Santa Clara Groundwater Delivery Area
Alpha Analytical laboratory report

References

Tentative Order No. R2-2018-XXXX, NPDES Permit No. CAG912004, General Waste Discharge Requirements for Discharge or Reclamation of Extracted Brackish Groundwater, Reverse Osmosis Concentrate Resulting from Treated Brackish Groundwater, and Extracted Groundwater from Structural Dewatering Requiring Treatment to Surface Waters.

Order No. R2-1012-0060, NPDES No. CAG912004, General Waste Discharge Requirements for Discharge or Reuse of Extracted Brackish Groundwater, Reverse Osmosis Concentrate Resulting from Treated Brackish Groundwater, and Extracted Groundwater from Structural Dewatering Requiring Treatment.

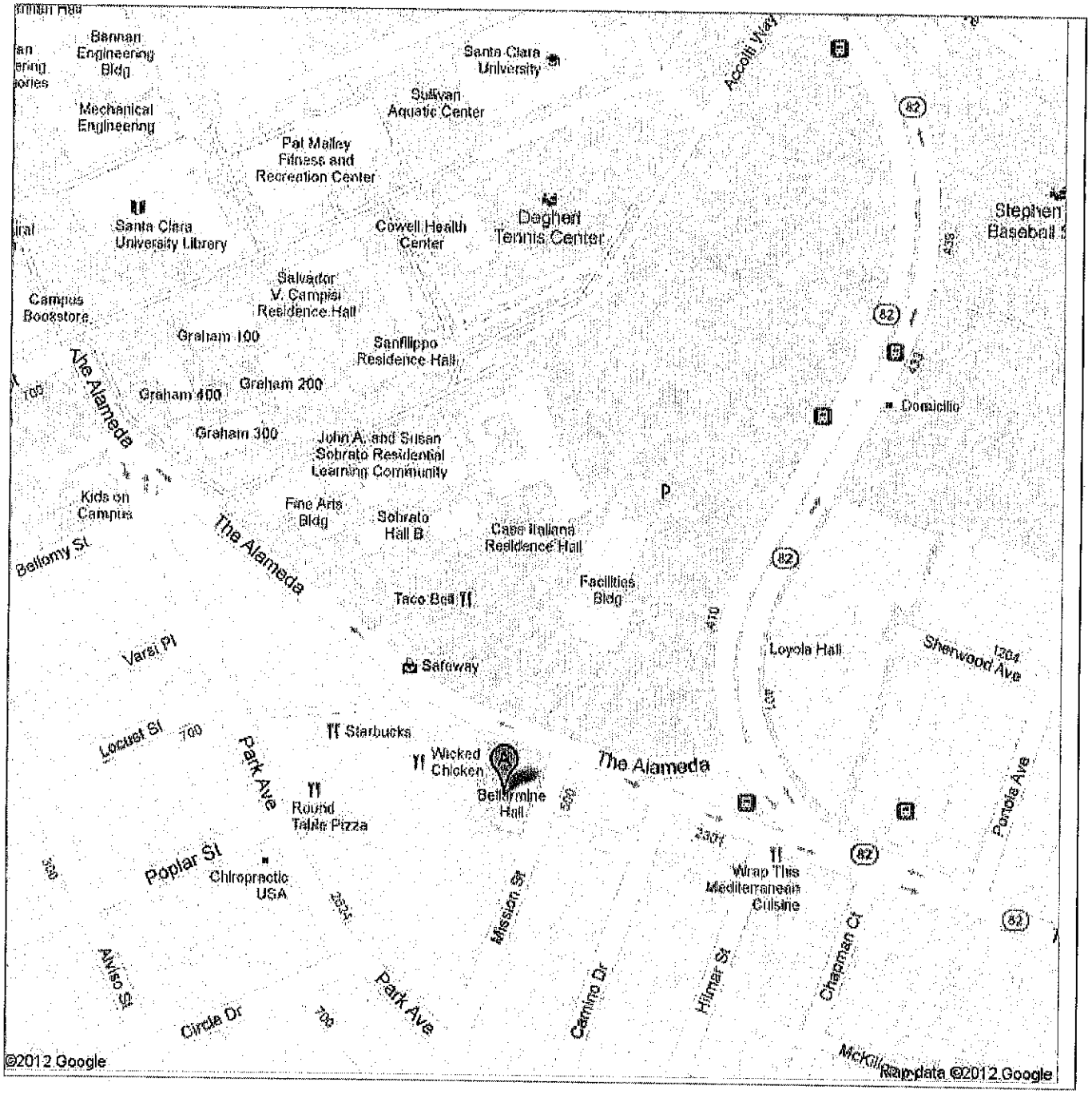
CH2M-Hill, June 2010, Review of Available Technologies for the Removal of Selenium from Water.

Golder Associates, May 2010, Hydrologic Investigation, Lehigh Permanente Quarry.

Google

Address **2505 The Alameda**
Santa Clara, CA 95050

Figure 1. Location Map



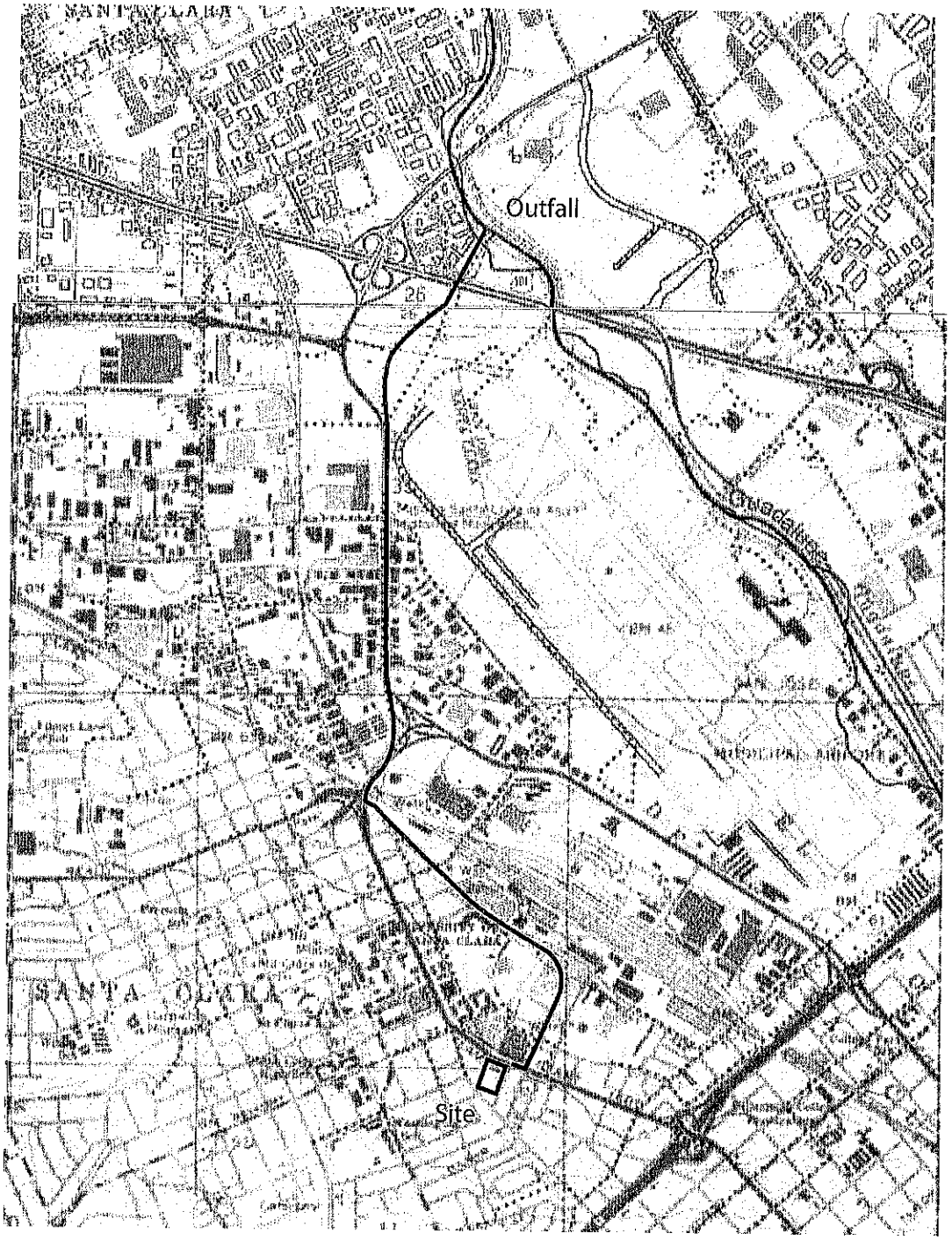


Figure 2. Storm drain pipeline alignment from site to outfall at Guadalupe River

Source: Thompson, S.C., and Sowers, J.M., 2005, Creek & Watershed Map of Central San Jose and Vicinity and Map of Milpitas and North San Jose: Oakland Museum of California.

Figure 3. Aerial photo of Guadalupe River showing storm drain outfall and San Jose Regional Wastewater Facility Outfall.

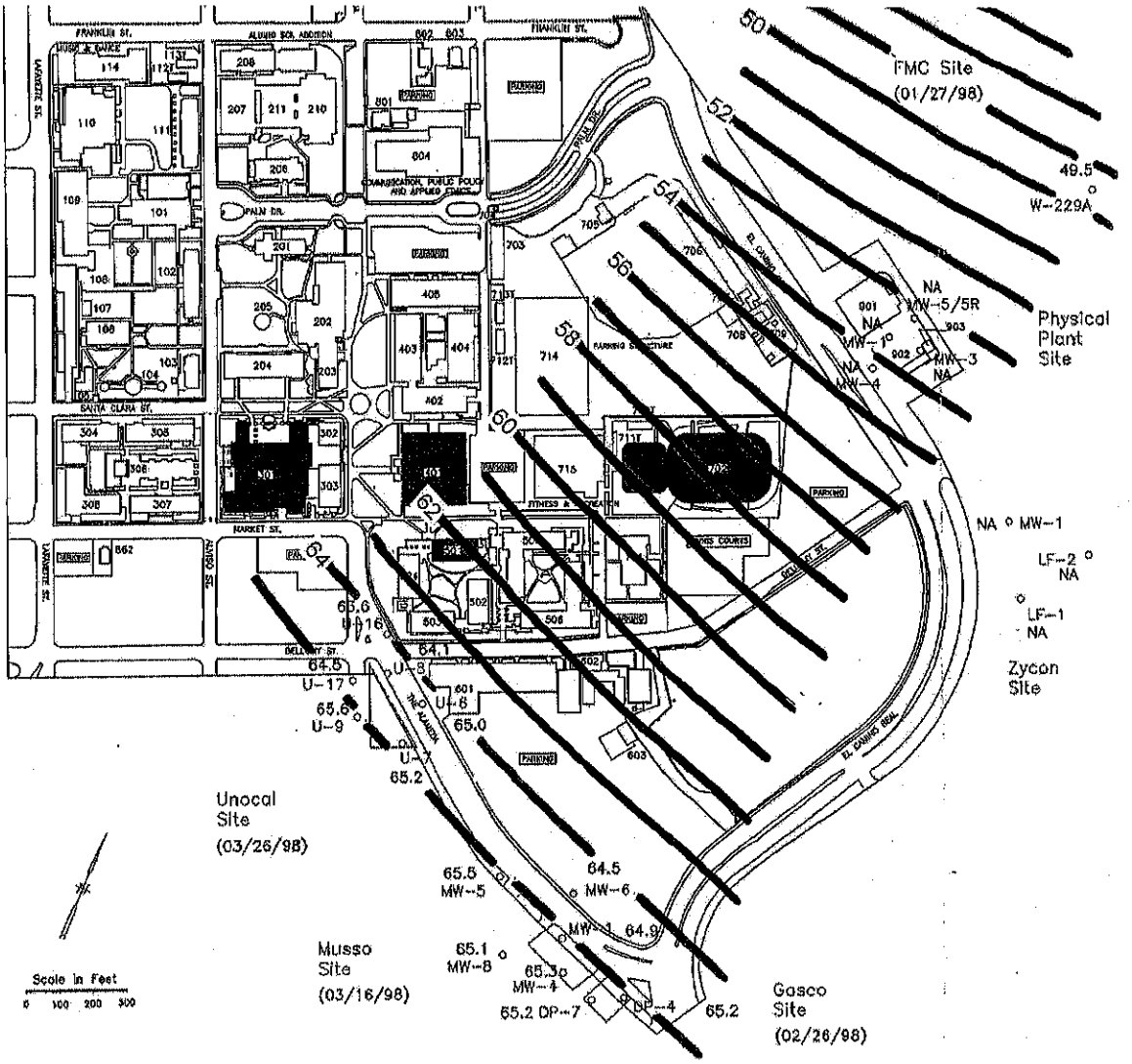


Figure 4. Shallow groundwater elevation contours in March 1988.

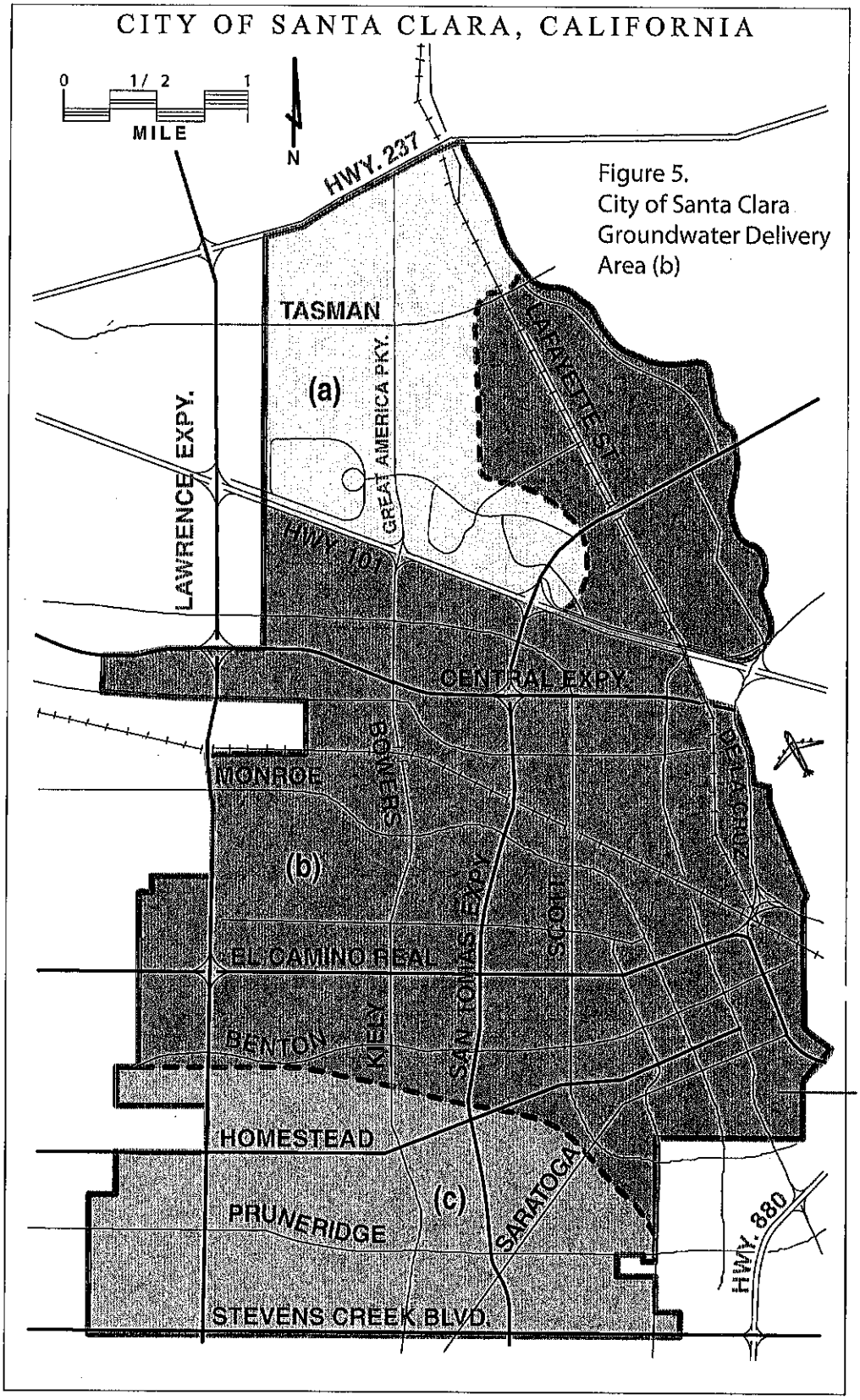


Figure 5.
City of Santa Clara
Groundwater Delivery
Area (b)

☐ (a) - SFPUC Hetch Hetchy System
▦ (b) - City of Santa Clara Groundwater
▦ (c) - SCVWD Treated Surface Water

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Central Valley: 9090 Union Park Way, Suite 113, Elk Grove, CA 95624 •Phone: (916) 686-5190 • Fax: (916) 686-5192

Environmental.Com	Project Manager: David Pingatore	
262 Rickenbacker Circle	Project: Ulrick & Associates	Reported:
Livermore, CA 94551	Project Number: SCU Bellarmine Monitoring	04/26/18 13:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Catch Basin WW Grab	18D1794-01	Water	04/17/18 09:05	04/17/18 21:45
Potable Water Hose Bib DW1	18D1794-02	Water	04/17/18 09:30	04/17/18 21:45

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Environmental.Com 262 Rickenbacker Circle Livermore, CA 94551	Project Manager: David Pingatore Project: Ulrick & Associates Project Number: SCU Bellarmine Monitoring	Reported: 04/26/18 13:09

	Result	Reporting Limit	Dilution	Batch	Prepared	Analyzed	Method	Note
Catch Basin WW Grab (18D1794-01)		**Sample Type: Water**				**Sampled: 04/17/18 09:05**		
Field Analyses								
pH	**6.21 pH Units**	**1.68**	1	AD83854	04/17/18 09:05	04/17/18 09:05	SM4500-H+ B	
Metals by EPA Method 200.8 ICP/MS								
Selenium	**12 ug/L**	**8.0**	4	AD83927	04/19/18 11:00	04/21/18 07:48	EPA 200.8	
Metals (Dissolved) by EPA Method 200.8 ICP/MS								**FILT**
Selenium, dissolved	**11 ug/L**	**8.0**	4	AD84038	04/23/18 14:00	04/24/18 13:59	EPA 200.8	
Potable Water Hose Bib DW1 (18D1794-02)		**Sample Type: Water**				**Sampled: 04/17/18 09:30**		
Metals by EPA Method 200.8 ICP/MS								
Selenium	**10 ug/L**	**8.0**	4	AD83927	04/19/18 11:00	04/21/18 01:07	EPA 200.8	

Appendix C
Response to Comments

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESPONSE TO WRITTEN COMMENTS

on Tentative Order for
Discharge or Reclamation of Extracted Brackish Groundwater, Reverse Osmosis Concentrate Resulting from Treated Brackish Groundwater, and Extracted Groundwater from Structural Dewatering Requiring Treatment to Surface Waters in the San Francisco Bay Region

The Regional Water Board received written comments from Santa Clara University (April 29, 2018) regarding a tentative order distributed for public review on March 30, 2018.

Regional Water Board staff has summarized the comments, shown below in *italics* (paraphrased for brevity), and followed each comment with staff's response. For the full content and context of the comments, please refer to the comment letters.

All revisions to the tentative order are shown with underline text for additions and strikethrough ~~text~~ for deletions. This document also contains staff-initiated revisions in addition to those arising from the response to comments.

Santa Clara University

University Comment 1: *The University requests retaining the existing technology-based effluent limitations (TBELs) for pH. The University has violated the pH limits five times over the last five years due to high concentrations of naturally-occurring carbon dioxide in its groundwater. It is concerned about the permit requirement to cease discharge if an effluent limit is exceeded.*

Response: We did not change the pH TBELs in this tentative order relative to the previously adopted order. Moreover, Monitoring and Reporting Program (MRP) section IV.D of the tentative order is consistent with MRP sections IV.C and X.D.3 of the previous order. Because the University's pH violations appear to relate to elevated carbon dioxide concentrations in its groundwater, we encourage the University to consider engineering measures that might adjust the pH. For example, the University could consider installing a mechanical aerator that oxygenates the effluent as it exits the groundwater extraction system. If the University must cease discharge for a time, it may consider routing effluent to the sanitary sewer or storing it onsite until it can resolve the pH concern.

University Comment 2: *The University requests revising the selenium water quality-based effluent limitations (WQBELs) in the tentative order so it can comply. The University points out that it discharges groundwater that would flow to the Guadalupe River whether it discharges the water or not.*

Response: We revised the selenium WQBELs for the University's structural dewatering discharge to reflect assimilative capacity that exists within the receiving water, the Guadalupe River. The new selenium WQBELs reflect dilution within the Guadalupe River

in accordance with the State Implementation Policy (SIP). No other facilities enrolled under this general permit discharge to the same reach of the Guadalupe River. This revision addresses the inordinate technical and financial burden the originally proposed WQBELs would have placed on the University for its relatively small discharge of naturally-occurring selenium.

We revised Table 3 of the tentative order as follows:

Table 3. Effluent Limitations for Category 3 Discharges

Pollutant	Discharge to Receiving Waters Used as Drinking Water[1]		Discharge to Other Receiving Waters	
	Monthly Average (µg/L)	Daily Maximum (µg/L)	Monthly Average (µg/L)	Daily Maximum (µg/L)
⋮	⋮	⋮	⋮	⋮
Selenium, Total Recoverable[4]	4.1	8.2	4.1	8.2
Selenium, Total Recoverable[5]	21	27	21	27
Chlorine, Total Residual	0.0 mg/L at all times[46]			

⋮

Footnotes:

⋮

[3] These limits also apply to discharges to tidally influenced reaches of waters draining to San Francisco, San Pablo, and Suisun Bays.

[4] These limits do not apply to Santa Clara University's discharge from 2505 The Alameda, Santa Clara.

[5] These limits apply only to Santa Clara University's discharge from 2505 The Alameda, Santa Clara.

[46] As explained in MRP section IX.B.5, a non-detect result using a detection level equal or less than 0.1 mg/L will not be considered out of compliance.

We revised Attachment F (Fact Sheet) section IV.C.3.c as follows:

> **Ambient Background Data.** The SIP states that, when calculating WQBELs, ambient background concentrations are to be either the observed maximum ambient water column concentrations or, for water quality objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations. Because the receiving waters for discharges from the facilities covered under this permit are varied, and because receiving waters are not expected to contain significant concentrations of pollutants related to these discharges, receiving water background concentrations were not considered for this analysis, with one exception. This Order accounts for ambient selenium concentrations in the Guadalupe River as measured and reported by the Santa Clara Valley Urban Runoff Pollution Prevention Program in 2013.

We revised Fact Sheet Table F-7 as follows:

Table F-7. Summary of WQBELs for Category 3 Discharges

Pollutant	CTR-Human Health				CTR-Aquatic Life		MCLs	
	Discharges to Receiving Waters Used as Drinking Water		Discharges to Other Receiving Waters		Discharges to All Receiving Waters		Discharges to Receiving Waters Used as Drinking Water	
	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
Selenium, Total Recoverable[1]	---	---	---	---	4.1	8.2	50	100
Selenium, Total Recoverable[2]	---	---	---	---	21	27	50	100

⋮

Footnotes:

[1] These limits do not apply to Santa Clara University's discharge from 2505 The Alameda, Santa Clara.
[2] These limits apply only to Santa Clara University's discharge from 2505 The Alameda, Santa Clara.

We revised Fact Sheet section IV.C.4.a as follows:

Mixing Zones and Dilution. This Order authorizes discharges to many types of receiving waters, including some that are likely dry during the summer months. In most instances, it does not establish any mixing zones ~~for any discharge~~; therefore, the WQBELs are calculated without accounting for any dilution credits. ~~This Order authorizes discharges to many types of receiving waters, the majority of which are anticipated to be storm drain systems that discharge to rivers, creeks, and streams. Many of these receiving waters are likely dry during the summer months, and thus dilution credits are inappropriate.~~ However, this Order grants a selenium mixing zone and dilution credit for Santa Clara University's discharge to the Guadalupe River from 2505 The Alameda in Santa Clara (37°22'41"N, 121°56'11"W). The Guadalupe River has adequate capacity to assimilate selenium at that location, and the Regional Water Board has not granted a selenium mixing zone for any other discharge within this reach of the Guadalupe River. Moreover, the selenium mixing zone will meet all the conditions listed in SIP section 1.4.2.2.

Santa Clara University's discharge mixes completely with Guadalupe River water. SIP section 1.4.2.1 specifies how to calculate dilution credits for completely mixed discharges. For chronic aquatic life objectives, the SIP allows a dilution credit calculated by dividing the 7Q10 river flow (the average low flow that occurs for seven consecutive days with a statistical frequency of once every 10 years) by the four-day average daily maximum discharge flow. The 7Q10 Guadalupe River flow is 8.27 cubic feet per second (cfs) based on U.S. Geological Survey (USGS) data collected from April 1, 2003, through March 31, 2017, at a monitoring station near Highway 101 in San Jose, about 2,000 feet upstream of the discharge (the 7Q10 flow was calculated using USGS SW Toolbox, version 1.0.2). Santa

Clara University's four-day average daily maximum discharge flow is assumed to be as high as the maximum design capacity of its groundwater extraction system (0.134 cfs). The SIP, therefore, allows a maximum dilution credit (D) of 62.

To preserve some assimilative capacity for selenium from other possible discharges to this reach of the Guadalupe River, this Order restricts the selenium dilution credit for Santa Clara University's discharge to 10. This is the smallest dilution credit that results in selenium WQBELs with which Santa Clara University can readily comply. These WQBELs are based on the highest selenium concentration Santa Clara University is expected to discharge, about 21 µg/l. Santa Clara University has sampled for selenium seven times, and the highest concentration found was 16 µg/l. To account for the relatively small sample size, the highest measured concentration was multiplied by 1.3 to estimate the likely 95th percentile concentration with 95 percent confidence (based on a coefficient of variation of 0.2) as explained in section 3.3.2 (see Table 3-2) of the *Technical Support Document for Water Quality-Based Toxics Control* (U.S. EPA, March 1991).

We revised Fact Sheet section IV.C.4.c as follows:

WQBELs Based on Aquatic Life Criteria. WQBELs based on Basin Plan and CTR aquatic life criteria are calculated in accordance with SIP section 1.4 with a default coefficient of variation of 0.6. For Santa Clara University, a coefficient of variation of 0.2 was used to calculate selenium WQBELs based on available monitoring data.

We revised Fact Sheet Table F-10 as follows:

Table F-10. Aquatic Life-Based WQBELs for Category 3 Discharges—Selenium

Pollutant	Selenium[1]	Selenium[2]
Units	µg/L	µg/L
Criteria –Acute	20	20
Criteria –Chronic	5	5
Dilution Factor	0	10
No. of samples per month	4	4
Maximum Background Concentration in Receiving Water	3.3	3.3
ECA acute	20	187
ECA chronic	5	22
CV (selected)	0.6	0.2
ECA acute mult99	0.32	0.64
ECA chronic mult99	0.53	0.8
LTA acute	6.4	120
LTA chronic	2.6	18
minimum of LTAs	2.6	18
AMEL mult95	1.6	1.2
MDEL mult99	3.1	1.6
AMEL (aq life)	4.1	21
MDEL(aq life)	8.2	27
MDEL/AMEL Multiplier	2.01	1.3

Pollutant	Selenium[1]	Selenium[2]
Units	µg/L	µg/L
AMEL (human hlth)	------	------
MDEL (human hlth)	------	------
minimum of AMEL for Aq. life vs HH	4.1	21
Final limit - AMEL	4.1	21
Final limit - MDEL	8.2	27

Footnotes:

[1] These limits do not apply to Santa Clara University's discharge from 2505 The Alameda, Santa Clara.
[2] These limits apply only to Santa Clara University's discharge from 2505 The Alameda, Santa Clara.

Staff-Initiated Changes

1. We revised Attachment B (Notice of Intent Form) section VI to require contact information for any consulting firm working for the discharger:

VI. FACILITY INFORMATION

A. Facility Name:			
D. Operation and Maintenance Professional Engineer's Information (see Section XI.F.5 for further instructions)			
Name	California License Number Expiration Date		
Street Address			
City	State	Zip Code	
Email			
E. Consulting Firm's Information (see Section XI.F.6 for further instructions)			
Contact Person	Company Name		
Street Address			
City	State	Zip Code	Phone No.
Email			

2. We added Notice of Intent Form section XI.F.6 to require additional information regarding any consulting firm working for the discharger:

> **Consulting Firm's Information.** Provide the name and contact information of the consultant working on behalf of the discharger.

3. We revised Attachment E (Monitoring and Reporting Program) Table E-2 to update the required analytical test methods for Category 1 dischargers:

Table E-2. Minimum Monitoring Requirements for Category 1 Discharges

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
Flow	GPM/GPD/ MGM	--	Continuous	--	Continuous[1]	--
Electrical Conductivity	S/m	EPA 120.1 or SM2510B	Grab	--	1/Quarter	--
pH	standard units	EPA 150.2	Grab		1/Quarter	[2]
Temperature	°C	--	Grab	--	1/Quarter	--
Turbidity	NTU	EPA 180.1 or SM2130B	Grab	--	1/Quarter	--
Total Dissolved Solids	mg/L	--	--	--	1/Quarter	--
Dissolved Oxygen	mg/L	--	--	--	1/Quarter	[2]
Hardness (as $CaCO_3$)	mg/L	EPA 130.1 or SM2340B	Grab	--	1/Year	[2]
⋮	⋮	⋮	⋮	⋮	⋮	⋮
Antimony, Total Recoverable	µg/L	EPA 204.2 or EPA 200.8	Grab	--	1/Year	--
Arsenic, Total Recoverable	µg/L	EPA 206.3 or EPA 200.8	Grab	--	1/Year	--
Beryllium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--
Cadmium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--
Chromium III[4]	µg/L	~~SM3500~~ --	Grab	--	1/Year	--
Chromium VI[4]	µg/L	SM3500 or EPA 218.6	Grab	--	1/Year	--
Copper, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--
Lead, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--
Mercury, Total Recoverable[5]	µg/L	EPA 1631	Grab	--	1/Year	--
Nickel, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--
Selenium, Total Recoverable	µg/L	EPA 200.8 or	Grab	--	1/Year	--

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
		SM 3114B or C				
Silver, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--
Thallium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Year	--
Zinc, Total Recoverable	µg/L	EPA 200.8	Grab	--	1/Year	--
Cyanide, Total	µg/L	SM 4500-CN-C or I or SM 4500-CN- E	Grab	--	1/Year	--
Volatile Organic Compounds (VOCs)[6]	µg/L	EPA 8260B (full list)	Grab	--	Once	--
Semi-volatile organic compounds (SVOCs) excluding polynuclear aromatic hydrocarbons (PAHs)[7]	µg/L	EPA 8270C	Grab	--	Once	--
PAHs	µg/L	EPA 610 or EPA 8270C	Grab	--	Once	--
⋮	⋮	⋮	⋮	⋮	⋮	⋮
Standard Observations	--	--	--	--	1/Quarter[9]	[2]

4. We revised Monitoring and Reporting Program Table E-3 to update the required analytical test methods for Category 2 dischargers:

Table E-3. Minimum Monitoring Requirements for Category 2 Discharges

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
Flow	GPM/GPD/ MGM	--	Continuous	--	Continuous[1]	--
Electrical Conductivity	S/m	EPA 120.1 or SM2510B	Grab	--	1/Month	--
pH	standard units	EPA 150.2	Grab		1/Month	[2]
Temperature	°C	--	Grab	--	1/Quarter	--

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
Turbidity	NTU	EPA 180.1 or SM2130B	Grab	--	1/Month	1/Month [2]
Total Dissolved Solids	mg/L	--	--	--	1/Month	--
Dissolved Oxygen	mg/L	--	--	--	1/Month	[2]
Hardness (as $CaCO_3$)	mg/L	EPA 130.1 or SM2340B	Grab	--	1/Quarter	[2]
⋮	⋮	⋮	⋮	⋮	⋮	⋮
Antimony, Total Recoverable	µg/L	EPA 204.2 or EPA 200.8	Grab	--	1/Quarter	--
Arsenic, Total Recoverable	µg/L	EPA 206.3 or EPA 200.8	Grab	--	1/Quarter	--
Beryllium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--
Cadmium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--
Chromium III[4]	µg/L	~~SM3500 --~~	Grab	--	1/Quarter	--
Chromium VI[4]	µg/L	SM3500 or EPA 218.6	Grab	--	1/Quarter	--
Copper, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--
Lead, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--
Mercury, Total Recoverable[5]	µg/L	EPA 1631	Grab	--	1/Quarter	--
Nickel, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--
Selenium, Total Recoverable	µg/L	EPA 200.8 or SM 3114B or C	Grab	--	1/Quarter	--
Silver, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--
Thallium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Quarter	--
Zinc, Total Recoverable	µg/L	EPA 200.8	Grab	--	1/Quarter	--

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
Cyanide, Total	µg/L	SM 4500-CN-C or I or SM 4500-CN- E	Grab	--	1/Quarter	--
Volatile Organic Compounds (VOCs)[6]	µg/L	EPA 8260B (full list)	Grab	--	Once	--
Semi-volatile organic compounds (SVOCs) excluding polynuclear aromatic hydrocarbons (PAHs)[7]	µg/L	EPA 8270C	Grab	--	Once	--
PAHs	µg/L	EPA 610 or EPA 8270C	Grab	--	Once	--
⋮	⋮	⋮	⋮	⋮	⋮	⋮
Standard Observations	--	--	--	--	1/Quarter[10]	[2]

⋮

5. We revised Monitoring and Reporting Program Table E-4 to update the required analytical test methods for Category 3 dischargers:

Table E-4. Minimum Monitoring Requirements for Category 3 Discharges

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
Flow	GPM/GPD/ MGM	--	Continuous	--	Continuous[1]	--
Electrical Conductivity	S/m	EPA 120.1 or SM2510B	Grab	--	1/Year	--
pH	standard units	EPA 150.2	Grab		1/Month, then 1/Quarter	[2]
Temperature	°C	--	Grab	--	1/Year	--
Turbidity	NTU	EPA 180.1 or SM2130B	Grab	[2]	1/Month, then 1/Quarter	[2]
Total Dissolved Solids	mg/L	--	--	--	1/Month	--
Dissolved Oxygen	mg/L	--	--	--	1/Year	[2]
Hardness (as $CaCO_3$)	mg/L	EPA 130.1 or SM2340B	Grab	--	1/Year	[2]
⋮	⋮	⋮	⋮	⋮	⋮	⋮

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
Antimony, Total Recoverable	µg/L	EPA 204.2 or EPA 200.8	Grab	--	1/Two Years	[2]
Arsenic, Total Recoverable	µg/L	EPA 206.3 or EPA 200.8	Grab	--	1/Two Years	[2]
Beryllium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Two Years	[2]
Cadmium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Two Years	[2]
Chromium III[4]	µg/L	~~SM3500 --~~	Grab	--	1/Two Years	[2]
Chromium VI[4]	µg/L	SM3500 or EPA 218.6	Grab	--	1/Two Years	[2]
Copper, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	[2]	1/Year	[2]
Lead, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Two Years	[2]
Mercury, Total Recoverable[5]	µg/L	EPA 1631	Grab	--	1/Two Years	[2]
Nickel, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	[2]	1/Year	[2]
Selenium, Total Recoverable	µg/L	EPA 200.8 or SM 3114B or C	Grab	[2]	1/Year	[2]
Silver, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Two Years	[2]
Thallium, Total Recoverable	µg/L	EPA 200.9 or EPA 200.8	Grab	--	1/Two Years	[2]
Zinc, Total Recoverable	µg/L	EPA 200.8	Grab	--	1/Two Years	[2]
Cyanide, Total	µg/L	SM 4500-CN-C or I or SM 4500-CN- E	Grab	[2]	1/Year	[2]
Volatile Organic Compounds (VOCs)[6]	µg/L	EPA 8260B (full list)	Grab	--	Once	--
Semi-volatile organic compounds (SVOCs) excluding	µg/L	EPA 8270C	Grab	--	Once	--

Parameter	Units	Analytical Test Method	Sample Type	Influent (INF-00 *n*)	Effluent and Reclaimed Water (EFF-*n*, REC- *n*)	Receiving Water (RSW-*n*U, RSW-*n*D)
polynuclear aromatic hydrocarbons (PAHs)[7]						
PAHs	µg/L	EPA 610 or EPA 8270C	Grab	--	Once	--
⋮	⋮	⋮	⋮	⋮	⋮	⋮
Standard Observations	--	--	--	--	1/Quarter[10]	[2]

⋮

6. We revised Fact Sheet Table F-5 to correct the Maximum Effluent Concentration (MEC) detected for selenium for Category 3 discharges:

Table F-5. Reasonable Potential Analysis – Category 3 Discharges

CTR No.	Pollutant[1]	Unit	Governing Criteria	MEC or Minimum DL [1,2]	Result [3]
⋮	⋮	⋮	⋮	⋮	⋮
9	**Nickel**				
	South SF Bay Discharge	**µg/L**	**19**	**39**	**Yes**
	Central and Lower SF Bay Discharge	**µg/L**	**13**	**39**	**Yes**
	Suisun or San Pablo Bay Discharge	**µg/L**	**30**	**39**	**Yes**
	Freshwater Discharge	**µg/L**	**52**	**39**	**Yes**
10	**Selenium**	**µg/L**	**5.0**	**~~15~~16**	**Yes**
11	Silver	µg/L	2.2	0.25	No
⋮	⋮	⋮	⋮	⋮	⋮

⋮